

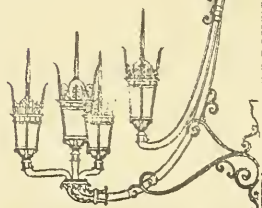
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# INCENTIVE BONDING FOR BOSTON

A Report  
to the  
Special Reclamation Authority

July, 1974



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## Table of Contents

I.	Introduction	1
II.	Incentive Zoning Explained	3
	A. How It Works	4
	B. Incentive Zoning in Use: New York and San Francisco	12
	C. Prerequisites for Success	33
III.	The Boston Setting	43
	A. The Evolution of Zoning Controls	44
	B. Actual Development Patterns	59
	C. The Status of Controls Today	61
IV.	Incentive Zoning for Boston?	63
	A. The Potential Impact	64
	B. Meeting the Prerequisites: Can it work here?	72
	C. The Direction of Effort	79
	D. Next Steps: Tasks and Participants	90

## Appendices

A.	Zoning Map, Boston Proper	93
B.	Excerpts from Boston Zoning Code	95
C.	Revision of Zoning Districts	103
D.	Calculating Bonus:Amenity Relationships	104
E.	Excerpts from "Boston Downtown Study" (1969)	109
F.	Excerpts from Ordinances in Other Cities	115





## I. INTRODUCTION



## I. INTRODUCTION

Incentive zoning is an approach to land-use control that has received increasing attention and use in major U.S. cities in recent years. This report presents the results of a study commissioned by the Boston Redevelopment Authority to examine the use of that technique and explore its potential applicability in Boston.

The report attempts to respond to a number of related concerns identified by the BRA at the outset and during the course of the study. First, incentive zoning is a refinement of development controls that has been applied elsewhere with reputed success, and the Authority wished to make certain that it was fully acquainted with development in the field and in a position to take advantage of all technical advances available. Second, the city's efforts to amend the zoning code to provide for greater flexibility, and particular aspects of practice under that code, have led to concern that the unity and coherence of the development policy that it was intended to express may have been overly diluted. Third, the scale and pace of recent and proposed office construction in Boston raised once again the question of the impact of intensive development on the city and the course the city should pursue in relation to it. In short, conditions in the development market have changed rapidly and substantially in recent years, and this study can be considered as part of the BRA's effort to re-evaluate the economic and environmental effects of present zoning provisions and practices and their performance in meeting overall city objectives.

The report is divided into three sections. The first considers the nature and procedures of incentive zoning and its implementation in other



cities. The second examines pertinent aspects of conditions in Boston, specifically land-use controls and recent development patterns. The final section discusses the possible application of this approach here, and recommends further necessary action, including more detailed exploration of important questions that could only be considered in a preliminary matter in the present study.

In the course of this study a great deal of assistance and information was provided by city officials in Boston and in New York City and San Francisco. The findings and recommendations presented here are the opinion and responsibility of the consultant, and should not be taken to reflect the position of the BRA or any other city agency or individual; but the contribution and cooperation of all those contacted has been an essential ingredient in making this study possible.



## II. INCENTIVE ZONING EXPLAINED





## II. INCENTIVE ZONING EXPLAINED

### A. How it works

1. The concept
2. The zoning base: FAR
3. Intensity of development
4. Planning and flexibility
5. Zoning as a mediator

### B. Incentive Zoning in use: New York and San Francisco

1. Objectives sought
2. Approaches to the design of an ordinance
3. Results to date

### C. Prerequisites for success

1. Legality
2. Development pressure
3. A plan with appropriate objectives and means
4. Workable, equitable procedures
5. Effective administration



## A. How it works

### 1. The concept

Incentive zoning is simple in concept. It functions in relation to a central fact of urban real estate development: that property values are directly related to the intensity of use permitted. In general, the higher the intensity allowed, the higher the value of the land itself, and, assuming development to the maximum, the greater the value of any building developed on it.

Incentive zoning offers property owners within a selected area the option of obtaining an increased intensity of development over existing limits. This intensity bonus is the "incentive", a direct clearcut financial advantage. To obtain the bonuses, developers must provide stipulated types of improvements or "amenities", or develop in preferred locations, to offset the impact of the increased density or to provide other public benefits. This is accomplished within the framework of a plan for the area in question, often in the form of a set of planning goals, rather than a final, architecturally-envisioned "end-state" plan. Three types of objectives predominate in ordinances now in effect:

- o the defense of "less profitable" existing use patterns from the pressure of projected private redevelopment, including such varied subjects as legitimate theatres, retail store continuity, and landmark buildings;
- o the provision of amenities that will benefit the public but which do not provide any revenue to building owners, such as open plazas, parks, and direct connections to mass transit stations or public parking areas; and
- o the effort to channel new development into the specific locations



and the spatial forms that will be most favorable for the quality of downtown areas, in terms of pedestrian access and movement patterns, scenic views, sunlight exposure and air circulation, and related concerns.

## 2. The zoning base: FAR

Incentive zoning is a refinement of the density control aspects of the zoning code. For those not familiar with zoning in Boston, a short digression may be appropriate here. (Those familiar with "FAR" calculations, should skip this subsection and go on directly to "3. Intensity of development.") Zoning is, in effect a set of controls that limits what can be done with any particular parcel of land by separating the city into a series of districts. The districts are defined in terms of the type, intensity and spatial configuration of uses permitted, generally in a cumulative fashion. Thus in one zoning district, only single-family homes might be permitted; in another, commercial and retail development might be allowed in addition; in a third, light or heavy industrial uses. At the same time, zoning also controls the intensity of development allowed. In Boston, this was initially accomplished (under the 1924 Code) through a combination of height limitations and bulk controls (lot size and setback requirements). In the present Code, as in most major cities, the intensity of development is controlled by "floor area ratios". The Floor Area Ratio (FAR) expresses the maximum allowable ratio of the total area of all floors in a building to the area of the lot upon which it is built. FAR by itself does not specify either the amount of lot coverage or the height of the building, but only the total intensity of development. For





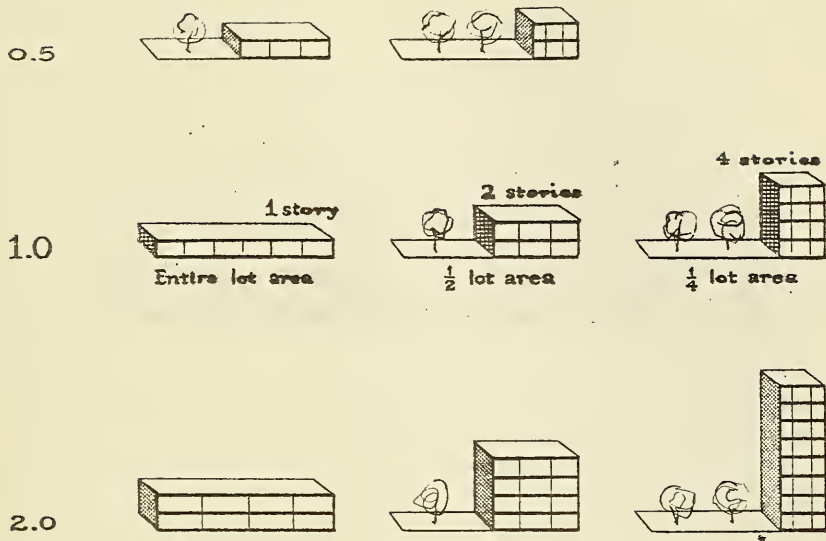
example, the owner of a 10,000 square foot lot in a zoning district with a maximum FAR of 5:1 could erect a building of 50,000 square feet at most. This could be a five-story building covering the entire lot, a ten-story building covering half of the lot, or any other variation (assuming no other height or setback controls were involved). This flexibility is illustrated in Figure 1 (page 7 ). The applicable regulations for Boston are set out in Article 13, Table B and defined in Article 15 of the Boston Zoning Code, included here in Appendix A.

### 3. Intensity of development

Incentive zoning permits development intensity to be increased beyond the base FAR within a district in return for the inclusion of specified amenities in the development. In respect to this quality of exchange, allowing a utilization of land beyond that permitted in the basic zoning code for a district, it is closely related to a number of other refinements and improvements in zoning technique that are not only familiar but already in effect. For example, the present Boston Zoning Code, which went into effect on December 31, 1964, introduced the "conditional use" to Boston Zoning. Here the code specifies that certain types of uses, often economically more advantageous ones to the developer, will be allowed within a given district not as a matter of right, but only if certain conditions are satisfied. These conditions are designed to insure that the use will not have an adverse effect on the district. (See Boston Zoning Code, Article 6) For example, a used-car lot is a conditional use within commercial ("Business B") districts if requirements (such as fencing) are met. But "incentive zoning", as the term is generally used,

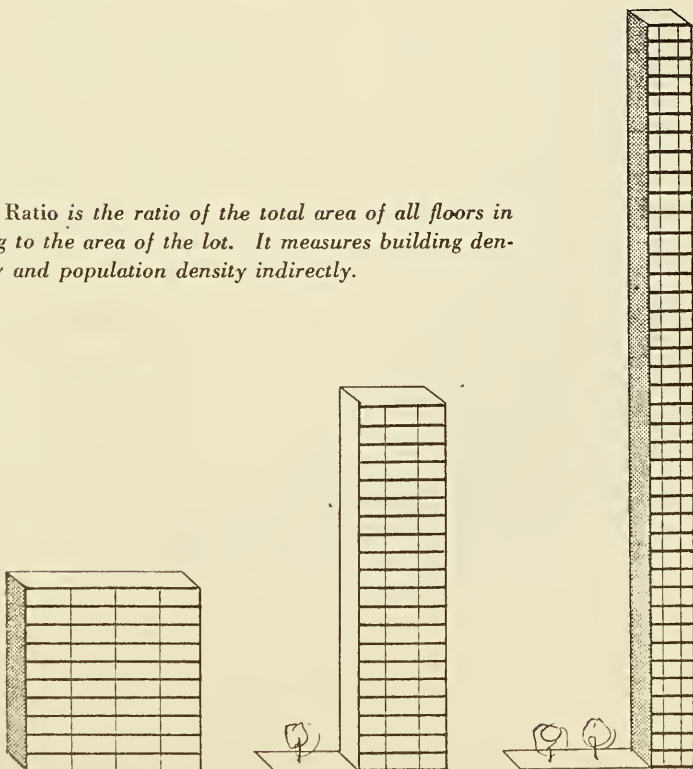


Figure 1



Floor Area Ratio is the ratio of the total area of all floors in the building to the area of the lot. It measures building density directly and population density indirectly.

10.0





exercises its control and provides its inducements through increases in intensity, rather than through changes in permitted uses -- although the type of improvement it requires from the property owner in exchange may well be in the form of a particular use. A familiar precedent here is the "planned unit development" or "cluster zoning" provision increasingly used in suburban zoning codes, under which a higher density of residential development (more units per acre) is permitted on the condition that the homes or apartments be clustered and open space or similar recreational amenities are provided. There is in fact no need to go far afield for functional analogies, for there are direct precedents in the current Boston Code for the type of intensity bonuses essential to incentive zoning. These are discussed later in this report (see Section IV, "The Boston Setting").

The question of precedent aside, it is important to recognize that the density bonus is a primary component of incentive zoning, and perhaps its most critical functional feature. For unless there is development pressure in an area, and specifically pressure for increased density, incentive zoning cannot work. For this reason, it has thus far been limited, for the most part, to the downtown areas of central cities, specifically those areas where there is a strong commercial office development market, and it has concentrated on ameliorating the impact of that development on such areas. In this sense it is a close parallel to "conditional zoning", since it stipulates improvements that will permit greater densities without having a significant negative effect on the area. But, as will be seen, this is only one aspect of its possible application.



#### 4. Planning and flexibility

An important characteristic of the incentive zoning approach is the increased degree of flexibility and broader range of impact it affords to zoning as a method of land-use control. Two aspects of this increased flexibility should be noted. First, traditional zoning is very much a broad-brush technique, limited by constitutional requirements of relatively large, homogeneous zoning districts and the prohibition against selective rezoning of individual lots ("spot zoning"). Incentive zoning, on the other hand, provides a means for responding on a more fine-tuned level to the individual advantages and disadvantages of a particular site, its location in relation to public transportation and pedestrian traffic, and similar qualities that are significant in terms of the impact of increased density of use. Second, traditional zoning, because it is founded on the "police power", is essentially negative in character, a device that specifies what cannot be done on any particular property. Incentive zoning expands beyond this preventive function of denying delictorious or incompatible activities to inducing desirable ones. It works as a carrot, rather than a stick, and can be used to bring about property improvements that could not be mandated. Particularly in view of the cutback and suspension of federal urban aid programs, and the sharp competition for limited city resources, it can provide a useful means for accomplishing needed improvements in downtown areas that are effectively beyond the capacity of the city at the present time.

In practice, the enforcement of zoning controls in Boston, as in most cities, has been considerably more flexible than a reading of the code





itself might suggest, even beyond the introduction of the "conditional use" approach. A number of means to overcome the broad-brush, restrictive aspects of the zoning code have been developed, some officially, others informally. But these devices operate in the absence of an explicit, unifying plan. For the most part, each situation is considered as a separate case as it arises. As a result, the increase in flexibility has come to a significant extent at the expense of the city's ability to plan and channel development, to take consistent and maximum advantage of it, and to minimize its negative impacts.

It is important to distinguish this set of practices from "incentive zoning". Although the concept of providing zoning bonuses for desired improvements could be employed in almost any context, "incentive zoning", in practice in many cities, is closely associated with public planning; that is, planning that is often flexible itself, but which is explicit as to the objectives to be sought within an area and the means to be used in achieving them, and in which both objectives and means are officially and publicly adopted before individual cases are considered. In this very important sense, Boston, though it has numerous procedures for providing increases in zoning intensity, and often extracts a quid pro quo from the developer, does not now have an incentive zoning system.

#### 5. Zoning as a mediator

Incentive zoning offers an increased flexibility, an opportunity to make planning more effective and more dynamic, and a means to induce improvements by property owners that might not be obtainable through compulsion, direct city action, or any other available approach. But it is a



refinement rather than a replacement of zoning itself, and must be considered in relation to the primary role that zoning will continue to play: a device for mediating among frequently conflicting interests and objectives. In relation to the intensity of development, the objectives zoning is to serve, in downtown Boston, for example, might be expressed as follows:

- o induce and increase economic development
- o ameliorate the impact of development on the quality of life
- o minimize public costs associated with development
- o minimize infringement on private rights.

This problem of resolving conflicting interests and goals has been recognized and directly addressed in each of Boston's past efforts to design and revise land-use controls. In recent years, these conflicts have been most publicly and acerbically revealed in the context of major public redevelopment projects. Now that the changes and reduction in federal aid make it probable that an increasing proportion and perhaps virtually all of redevelopment, will be privately sponsored, and will take place in large part through the private redevelopment of individual buildings and sites, the zoning code will have to bear a proportionately increased responsibility for resolving these conflicts, if they are to be mediated within a coherent framework of city plans and objectives. Incentive zoning has been used elsewhere to improve just this badly needed capability, and an examination of its use in other cities is an appropriate place to begin consideration of its potential utility in Boston. This comparative study can help to answer two questions: what can this technique be used to accomplish? What are the prerequisites for success?



B. Incentive Zoning in use: New York and San Francisco

Incentive zoning is a relatively new technique, with its first major application dating only from 1961. But it has already been applied in attempts to achieve a considerable variety of ends. Three aspects of this body of experience, centered in New York City and San Francisco, demand consideration: the objectives sought, the approaches taken in designing ordinances, and the results to date.

1. Objectives sought

There is a wide range of objectives, and of specific means chosen to achieve them, in the ordinances now in effect. But it will be seen that there is a consistent theme: a response to the special problems presented by the challenge of increased intensity of development.

Major objectives sought include:

- o Provision of urban open space
- o Protection of public redevelopment projects
- o Continuance of non-economic special uses
- o Continuance of non-competitive economic uses
- o Improved pedestrian access and movement
- o Provision of pedestrian "amenities"

o Provision of urban open space. The "plaza bonus" that became effective in New York City in 1961 was the first significant incentive zoning ordinance. It offered an increase of 20% over base FAR for the provision of open-air, street level "plazas" by buildings developed within the designated area. This was a response to the projected shift in office development into the mid-town area, particularly Sixth Avenue (the "Avenue of the Americas"), where it was expected that the existing zigurat-shaped buildings (a result of the set-back requirements in the earlier





zoning ordinance) would be replaced by the now-familiar unbroken rows of office boxes. It demonstrated the success of the incentive zoning concept, at least in the sense of utilization: virtually every major eligible building exercised the plaza option.

- o "Protection" of public redevelopment projects. The development of the Lincoln Center cultural complex was a major success of urban renewal in New York City. But it ironically threatened to be too successful for its own good, for the resurgence of the surrounding area -- for which the project was in part responsible -- led to private redevelopment and the incursion of office towers. A Lincoln Square special district was designed to protect and enhance the Center both architecturally (by controlling the massing of adjacent buildings) and through incentives for appropriate supportive street level uses (retailing, restaurants, speciality shops). A similar aim is served by the "Public Center Area District" zone in Detroit, which functions through design review by the City Planning Commission to protect the public investment in the civic center, which the district surrounds.

- o Continuance of "non-economic" special uses. Office development began to move westward in mid-town Manhattan in the 1960s, and this posed a serious threat to the Broadway theatre area, which plays a very special part in New York City's image, and as a whole is significant to the economically important tourist industry. Sites for office development as assembled required demolition of existing theatres, and no plans were being made for their replacement in the new buildings -- in part because space could be rented more profitably for non-theatre uses, in part to avoid the additional



complexity and uncertainty involved in theatre operations, in part because theatres were simply not an accepted component of office development. Legitimate theatres had in fact become such a marginal economic use that no new theatres had been built in the Broadway area for nearly forty years. The Special Theatre District was developed in response, providing for bonuses of up to 20% over base FAR in return for the inclusion of legitimate theatres and for their continued operation and maintenance.

o "Protection" and continuance of non-competitive economic uses. Mid-town Manhattan office development threatened to intrude on another historically and economically important functional area: the Fifth Avenue retailing district. Hi-rise office development has in general shied away from the inclusion of major retailing on the lower floors. The immediate concern was that a proposed office tower directly on the avenue (on the site of the former Best & Company store) would break-up the street level continuity of shopping that is considered to be an essential component of the avenue's continuing retailing strength, replacing it with relatively "dead" space: banks, airline offices, monumental lobbies. The bonus provisions of the Fifth Avenue special district that was designed in response, reject the mutual exclusion of use types characteristic of early zoning, and are an ambitious attempt to induce a mixed-use multi-layer sandwich: major retailing on the lower floors, an office tower above that, and hotel or apartment (rental, condominium or cooperative) residential uses at the top.

It should be noted that there is a distinction between the thrust of this ordinance and that of the Theatre District. In the Theatre District, the additional office space is to a large extent designed to provide a



continuing subsidy to offset the costs and risks of including what is generally admitted to be a marginal economic use. In the Fifth Avenue district, neither retailing (nor even residential use) is necessarily uneconomic and may in fact be quite profitable under existing ownership; but they cannot compete against office space, the "highest and best use" of the traditional economic analysis. This distinction is a delicate one; once the site in question is purchased in expectation of office development to full allowable FAR, the land price may in fact make all "lower" uses noneconomical, rather than simply place them at a competitive disadvantage. But in this regard, both districts can be seen as introducing a significant (if unsurprising) element into city policy: the recognition that when the city is considered as a whole, a different assessment of "highest and best use" may result even in an economic sense, compared to the assessment of any individual site. Thus the continuance of the Theatre District and the Fifth Avenue retail area may be of greater economic importance to New York City as a whole than the increased tax revenues that would result from development of particular individual office buildings within those areas. This is, of course, aside from any non-economic planning considerations (variety of uses, etc.). Thus there is a continued recognition that although city planning must be responsive to -- and perhaps rely directly on -- the initiatives of the private market, it cannot be subservient to those initiatives, for the economic benefits are by no means identical from the different perspectives.

o Improved pedestrian access and movement. Continuing development at increased densities in downtown urban areas presents additional loads on



street and transit patterns that may already be overcrowded and obsolete. A central objective of the more comprehensive incentive zoning measures in force -- the San Francisco ordinance, for example, and the Greenwich Street Special District in New York -- is to improve and enhance pedestrian access and movement within their districts. To accomplish this, bonuses are provided for a variety of development qualities, including: proximity to public transit stations; the provision of direct connections to those stations, or to parking areas; the provision of additional building entrances and exits; the provision of covered walkways and thru-block and above-grade pedestrian passages. Although many of these can be provided completely in an individual building, some of the ordinances (the Greenwich Street Special District, for example) rely on a planned set of connections that will only be effective if they are provided in all contiguous development, and the time-frame for completion is expected to be as long as ten to fifteen years.

- o Provision of pedestrian "amenities". The content and quality of structures and activities at street level is a continuing concern, particularly in older central cities, and a relatively high proportion of the ordinances in effect aim to improve and enhance street level "amenities".

This can perhaps best be treated in two categories. The first is the provision for particular types of uses on the street level and within arcades in new buildings, primarily the diverse retailing activities that are often swept away by new office development: speciality stores, service activities, restaurants, vending stands and similar activities. The second is the provision for the inclusion of non-revenue producing space, of which the plaza





bonus provision is really an example: open plazas, covered plazas, walkways, outdoor plantings, benches, small parks. A special extension of this second category is now being prepared for implementation in New York City in the form of a Special Park District that establishes a trustee-supervised fund for the improvement and maintenance of publicly-owned facilities upon which the development borders (in this case, the Park Avenue mid-street plantings and the Central Park walks and benches across from Fifth Avenue). And it might be most appropriate to include within this second category those provisions aimed to protect and enhance existing views along street lines and the amount and quality of sunlight and air circulation (for example, through setbacks, low upper story coverage, and, in the San Francisco ordinance, the inclusion of observation decks above the twenty story level).

o Other proposed uses. There are three possible objectives for an incentive zoning ordinance that should be noted in addition to the major provisions in use discussed above: historic preservation, the subsidy of low-income housing, and the preclusion of "adult entertainment" activities.

Landmark building preservation. The demolition of historic buildings in downtown areas has been a public issue in a number of cities, and the scarcity of funds for acquisition of such buildings has led to various attempts to preserve them through land-use controls. One method related to incentive zoning is the "development rights transfer", under which the owner of a designated landmark is empowered to sell to another property owner a portion of the theoretical, "unused" development potential of his property -- that is, the maximum buildable amount under the applicable



FAR, less the space occupied by the landmark property. New York City has such a provision, and a similar procedure was developed as part of the San Francisco downtown rezoning. A more extensive and ambitious program has been designed for Chicago (see John Costonis, The Chicago Plan: Incentive Zoning and the Preservation of Urban Landmarks, 85 Harvard Law Review 574, January, 1972). This provides for the establishment of a city-administered development rights "pool", allowing the city to purchase or condemn such rights where the owner does not take the initiative, and to resell the rights to owners of other properties within the defined district; the landmark owner also receives the benefits of reduced property taxes, based on the lower value of the property after the sale of the development rights. It should be noted that although this procedure does provide "incentives" to the landmark owner to maintain the existing property we have thus far been using the term "incentive zoning" to describe the situation in which a property owner is provided with an increase in allowed density as incentive; in this procedure, the increased density is provided not to the landmark owner, but to the owner of a different development site. In the New York City and San Francisco ordinances, the sale is restricted to owners of contiguous properties, adjacent to the selling property or across a street or alleyway. Under the "Chicago Plan", such sales would be allowed between property owners (directly or through the city-administered "pool") anywhere within the district, raising more difficult planning problems, and perhaps subject to more substantial legal attack, since the relationship between the increased density granted the recipient and the amelioration of the impact of increased density on that site is attenuated.



Subsidy of low-income housing. A proposed New York City ordinance would have established a special district on the lower East Side in which developers of market-price apartment buildings could obtain increased densities in return for either providing low-income units in their buildings (subsidizing the rent through the increased net income of the greater density allowed) or contributing to a city fund to be used for the development of low income housing within the area. Community leaders, however, perceived this as a threat to the general stock of relatively low-rent apartments in the area, and their sharp opposition to the proposal caused it to be withdrawn.

Preclusion of "Adult Entertainment". Several cities have investigated the zoning power as a source of control for "adult entertainment" uses (soft core or hard core films, live entertainment, bookstores, etc.). It is difficult to see how "incentive" zoning provisions could be adapted to this purpose, since they are effectively limited to new development. A bonus provided in return for a developer's commitment to exclude such uses from the building developed would of course have no impact on the large number of currently occupied and available sites. Moreover, an examination of the major recently developed office towers in Boston amply demonstrates that developers, seeking major tenants, are already motivated to exclude any use that might lower the image or quality of their building. Thus such a bonus, if made available, would in all probability be a wind-fall to new developments, providing them with increased densities without in the lease changing their plans.

In terms of the zoning power generally, New York City did give consideration to the possibility of controlling the situation in Times Square



through zoning, and there is some opinion (though not a formal one) that a division of a downtown district into areas of what might be called relative offensiveness (e.g., "soft core", "hard core", etc.) would withstand legal attack. But there is general agreement that it would be very difficult and perhaps impossible to administer. Zoning controls are in the first instance implemented not through the Police Department (the traditional morality enforcement agency) but through inspectors in the Buildings Department, not trained or experienced to make judgements on the relative offensiveness of such activities. Nor does the Zoning Board of Appeals appear to be the most appropriate forum in which to have such disputes resolved. It might also be noted that in light of recent United States Supreme Court decisions, the more acute varieties of "adult entertainment" can probably be suppressed directly in Boston, and drawing distinctions between the remaining "adult" and "non-adult" (for lack of a better euphemism) activities will pose considerable difficulties of draftsmanship and constitutionality. An unofficial policy of selective enforcement remains a possibility, but again the problems of administration already noted are severe."

## 2. Approaches to the design of an ordinance

Along with the variety of objectives that have been established for different ordinances, there have been significant variations in approach to the design of the ordinance itself. An examination of the experience in New York City and San Francisco reveals five important issues that should be explicitly recognized in considering the applicability of incentive zoning to Boston:





- o "Narrow" v. "broad" objectives
- o "Case" v. "district" design context
- o "Automatic" v. "discretionary" operation
- o "Cash" v. "kind" contributions
- o "Mandatory" v. "optional" bonus features
- o "Narrow" v. "broad" objectives. A useful distinction can be made

between ordinances with a very specific, relatively narrow or limited objective, and those which seek a broader, more complex goal. The Theatre District in New York City is perhaps the best example of the "narrow" ordinance, with a single objective and a single means to that objective -- the inclusion of new theatres in office development in the district. The 1961 "plaza bonus" presents very much the same case, and the Fifth Avenue special district, though more complex in design, also is directed to a relatively narrow primary goal -- the preservation of street-level retail continuity on Fifth Avenue. It is the success of these earlier "narrow" ordinances that provided the impetus for more ambitious attempts to direct and to take advantage of projected office development trends. The San Francisco Downtown Zoning and the New York City Special Greenwich Street Development District are broader in both the nature of their objectives and the time-frame in which those objectives are to be achieved, and are considerably more complex, presenting more options through which developers can qualify for the bonuses. The San Francisco ordinance -- which in its final form is a selection from an even broader range of proposed inclusions, in recognition of the probable diluting effect of too large a range of options -- is an attempt to affect overall development patterns in the



heart of the downtown area, with the following basic stated "purposes" and "bonus features" to achieve them:

<u>Purpose</u>	<u>Bonus Feature</u>
Accessibility	Rapid Transit Access directly from site Rapid Transit Proximity Parking Access with direct Pedestrian Link
Pedestrian Movement	Multiple Building Entrances Sidewalk Widening inside property lines Shortening Walking Distance from one street to another
Pedestrian Amenity	Public Plaza
Light and Air to Streets	Side Setback above 40 feet Low upper floor coverage; tower set back above 80 feet
View Protection & Enhancement	( " ) Observation deck above 20 stories

The "Special Greenwich Street Development District" in New York City, though confined to a smaller geographic area, is similar to the San Francisco ordinance in its goals and in some respects even more ambitious (for example, inclusion of multi-level pedestrian circulation elements, "mandatory" requirements, etc.). Because it is designed to respond to development that will take place over an estimated ten to twenty years or more, development which is just now beginning in earnest, and because it is intended to affect the overall shape of development in a number of respects -- pedestrian circulation and amenities, building massing, use inclusions -- no real assessment of its impact is yet possible. But it is important to note that both the Greenwich Street and San Francisco ordinances were developed in the context of a major planning effort for the districts in question. In San Francisco the Downtown General Plan



prepared in 1963 recommended an intensive study of the area, and local dissatisfaction with the existing zoning ordinance led in 1964 to the reduction of maximum FAR (from 20:1 to 16:1) and the initiation of a special Downtown Zoning Study that proposed the new ordinance in 1966. In New York City, the coming of the World Trade Center led to concern over development impacts on the narrow street patterns inherited from the colonial period. A report to the City Planning Commission in 1966 by a group of independent consultants led to the creation of a special Office of Lower Manhattan Development which developed and implemented the Greenwich Street plan (among other accomplishments). The common element here is a serious, comprehensive, detailed planning effort for the area as a precursor of and in conjunction with the design of the incentive zoning ordinance. Unless Boston can define its problems narrowly and specifically -- as in the theatre district situation in New York City, for example -- it should carefully consider mounting a similar level of planning effort.

o "Case" v. "district" design context. Incentive zoning ordinances apply not to single buildings or sites but to entire districts. In this they are no different from zoning codes in general. Any and all eligible property owners may take advantage of them. But the design of individual district regulations has frequently taken place in the context of negotiations over a particular proposed development with the developer, his architects and his attorneys.

There are several reasons for this. First, in a number of cases it has been the proposal for a specific development that has alerted city officials to the existence of a problem. For example, the Fifth Avenue district in



New York City was developed in response to a development proposed for an already assembled site that would have been the first major inroad of office development on the retail area. Thus the city had to develop an ordinance that in form and substance was acceptable to the developers of that site. Again, the development of the Greenwich Street District was sparked by a particular developer who contacted the Office of Lower Manhattan Development to obtain support for an increased FAR. A related reason for the design of the ordinance in the context of a specific "case", and in a manner satisfactory both to the city and to the developer, is that it can be immediately demonstrated that the ordinance is a practical, functioning one, rather than a planner's dream. This is a particular advantage where there is strong resistance to the concept involved, as was the situation in the proposed New York City theatre district. Long and volatile negotiations were required to gain the support of the first developer, and the specifics of the proposed district were hammered out in the context of resolving the details of that first theatre to be built under it. A further reason for this "case" approach advanced by those who have participated is that it insures developer support for the proposed zoning change -- at the very least, the support of the developer involved in the pilot project. So even where there is no development proposal posing a specific "threat", there is a strong argument to be made for this "case" approach -- that it helps to insure the design of a practical ordinance, that it obtains support for the zoning change in the development community, and that it is by definition responsive to the actual direction of development trends. And it should be remembered that even though the details are initially worked out within the relatively private





context of city-developer negotiations, it is by no means to be considered a covert, "deal-making" procedure; the resulting proposal must still go through the public process of debate and discussion before it can be incorporated into the zoning code.

Although this "case" approach is highly recommended by most of the New York City officials interviewed in the course of this study, and should be given consideration, it is not an absolutely necessary part of the design process. The fact that Boston is not the first city to approach the problem, and can consider past experience elsewhere, may make it less essential to take the case approach. San Francisco's zoning revision was in fact developed in relation to the overall study and resolution of downtown zoning problems, rather than the situation of a particular building, and in the face of a noted lack of cooperativeness and participation by the development community. But there is good reason to believe that even if Boston does take the "district" rather than the "case" approach, it would be possible to obtain the advice and participation of the development community -- and in fact, the real lesson of the New York City experience may be that such participation is to be sought and welcomed whatever approach is taken to the problem.

o "Automatic" v. "discretionary" operation. The ordinances in effect employ a variety of procedural approaches that can be ranked along a spectrum ranging from the "automatic" to the "discretionary". "Automatic" procedures essentially provide a list of eligible amenities or locational qualifications with stated bonuses, and depend primarily on the initiative of the developer, with a narrow review by the appropriate agency to see that requirements have been met. It should be noted that this approach is not necessarily limited to ordinances with "narrow" objectives; for example,



the Greenwich Street district, a relatively complex one, operates on this principle. Other ordinances are far more "discretionary" in character, with the details of the developer's contributions and the amount of bonuses worked out through cooperative agency-developer efforts in each situation as it arises (though within the framework provided by the ordinance). In part, the decision as to what type of operation to employ may depend on the nature of the objectives that are chosen. In the case of the New York City Lincoln Square and Theatre Districts, for example, each case has required extensive agency-developer contacts and negotiations. But it must be noted that it is the emphatic opinion of many of those most closely connected with the implementation of incentive zoning ordinances in New York that the "automatic" approach is highly preferable, that it maximizes developer participation, speeds the process itself, and that it may in fact be a precondition to success. The San Francisco district similarly adopted an "automatic" procedure, rejecting the "discretionary" approach. Such "automatic" procedures can provide the developer with an increased amount of certainty as to requirements and predictability of results in relation to the content and the time period of the process. Such increased certainty is one of the most highly esteemed qualities in the developer's art. Thus the choice of a more automatic process may not only increase the likelihood of successful functioning of the ordinance, it may in addition be a powerful inducement for obtaining support for a proposed ordinance in Boston's development community, and might increase the attractiveness of Boston as a development location. Finally, by reducing the need for extensive private negotiations between the city and developers, it may obtain and increase public support both for the zoning change and for development under it.



o "Cash" v. "kind" contributions. The earlier ordinances -- the New York "plaza bonus" and theatre districts, and the relatively comprehensive San Francisco downtown district -- provide space bonuses in return for on-site qualities (amenities or locational qualifications) provided directly by the developer. More recent ordinances are experimenting with the provision of space bonuses in return for cash contributions to a special-purpose fund. The rationale for this approach is clearest where the fund is to be used for improvements in the immediate vicinity of the site, or within the "district" bounds, that the developer cannot undertake -- for example, the Park district designed in New York City this year, in which the fund is used for improvements on city-owned property. Although the Park district works only through this fund, it is not necessary to take such an exclusive approach. The proposed low-income housing district in New York City would have offered developers the option either to provide low-rent units in their own buildings or to contribute to a fund to be used for low-income housing development in the district. The Greenwich Street district provides for cash contributions to a fund as one of the alternatives for bonus eligibility; in that case, the fund is to be used for improvement in mass transit facilities (subway entrances and stations) within the district, fulfilling one of the general objectives of the plan (improvements in pedestrian movement). An additional advantage of this approach, illustrated by the Greenwich Street district, is that building design is allowed it's required flexibility. The amenities provided on a given site, for example, will frequently fall short of qualifying for a "full" additional story of building height; an appropriate additional cash



contribution to the fund can be calculated to fill out precisely the additional space required.

There are, however, objections that have been raised to the use of such funds. A primary one is concern over the appearance of a "sale" of rights to intense development, and the related fear of improvidence, incompetence or worse in the administration of the fund. A more subtle problem is the possibility that the achievements of the fund will be offset by reductions in city effort to the same ends that would have been forthcoming in any case -- for example, a consequent reduction in city maintenance efforts on parks within the district, if the fund is aimed at improving those parks. Further, if funds are slow in coming, it may take overly long to obtain the necessary "critical mass" of funds to undertake proposed improvements. And care must be taken in the design of the fund's organization and procedures: the provision of an appropriate public board of trustees, restrictions against co-mingling with city funds, stipulation of objectives that are within the power of the board and that are appropriately related (in both planning and legal terms) to the increased intensity of development, and restrictions against the lowering of existing levels of city effort on related or identical objectives. This is not to say that these obstacles cannot be overcome. But a decision as to whether or not to rely on this "cash" approach, and to what degree, must await not only a determination of what objectives to seek in Boston, but the opinion and judgement of city officials and community leaders on the particular problems it might raise in the Boston context.





o "Mandatory" v. "optional" bonus features. As the term "incentive" suggests, the first incentive zoning ordinances worked through the presentation of "options" to developers within the district. In the "plaza bonus" and theatre districts, for example, developers are free to proceed without reference to the additional district requirements that the ordinance imposes, and only provide the stipulated bonus features if they wish to increase their FAR. With more complex objectives in view, later ordinances have expanded their controls to add to these "optional" bonus features a set of "mandatory" features that must be provided in development within the district lines. In the Fifth Avenue district, there are mandatory minimum requirements for specified retail uses that detail not only the type but also the amount and location of those uses, "in order to insure the continued development and stability of department stores, speciality stores, boutiques and international stores" within the district (Zoning Resolution, Sec. 87-03). The Greenwich Street district, in addition to use requirements (2.5% of floor space for retail uses) provides certain restrictions on building form (exterior walls in defined locations must coincide with street lines), as well as requiring the parking and loading facilities that are a familiar component of even the present Boston ordinance. Thus it can be seen that although these district plans are often referred to as "incentive zoning", they have mandatory features as well, stipulating requirements that must be met whether or not a developer desires to qualify for additional space, and designed to attain both use type and spatial planning objectives. In San Francisco, on the other hand, the final ordinance does not have "use" objectives (as in the Fifth Avenue district) and specifically excludes mandatory controls on building forms,



relying directly on bonuses to induce set-backs for "light and air" purposes, and relying indirectly on the cooperation of architects, whose importance and involvement increases where such ordinances are in effect, to obtain high design standards in the district. On the other hand, planners in New York believe that mandatory features can be critical to the success of a district plan. Again, this question of whether to include "mandatory" as well as "optional" features must await a determination of the objectives sought in Boston in any particular area of the city.

### 3. Results to date

It is still too early to make final judgements on the effectiveness of such a relatively new form of land-use control as incentive zoning. In light of experience to date, it is probably most accurate to characterize it as a promising rather than a proven technique, with particular reservations stemming from certain unanticipated results (which might also be described as planning failures) and the long period necessary to give many of the ordinances a real test.

o Long time-frame for completion. Many of the major special districts in New York are of recent vintage, and only a few buildings have actually been developed within each of them (for example, the Greenwich Street, Fifth Avenue Retail and Lincoln Square district). It is far from certain how widely their provisions will be utilized, and to what extent they will achieve their objectives. To make matters worse, the office space market has had its periods of doldrums, and development is moving far less rapidly than had once been hoped.



o Unanticipated results. There have been some difficulties encountered because of less than perfect estimation of costs attendant on proposed bonus features. For example, theatres built under the New York special theatre district have in the end cost as much as twice the original development cost estimates. But the problem of "unanticipated results" is far broader than this. For example, the "plaza bonus", the first of its kind, was warmly received by developers and fully utilized, but the results were considerably less than had been desired. The plazas are randomly distributed through the eligible area, provide space that is in large part "dead", little-used and uninteresting, and undermine the strong and characteristic building line and massing of Sixth Avenue without supplying any coherent urban form to replace it. The San Francisco ordinance was developed in a much more comprehensive planning context, but even there unexpected intense development at the edge (rather than the center) of the district lines has thrown off the hoped for urban form, and the development of properties on large sites has led to building heights that are the subject of considerable controversy and dismay. Comprehensive height and bulk regulations have since been put in force that would, for example, have imposed a maximum height of 360 feet on the site occupied by the Transamerica "Pyramid" Building erected under the ordinance -- a building that is over twice that limit.

But if there are unanswered questions, and if the ordinances may fall short of accomplishing their full objectives, there is still good reason to believe that the results, on balance, will be quite positive. First, it has been demonstrated that the concept is functional. Even if the plazas developed under the first New York City ordinance did not fulfill the



planning intent, it must be recognized that eligible developers participated as fully as possible and the city got what it asked for in the ordinance. Second, there have been notable individual successes. Three new theatres have already been opened in the New York City Theatre District, the first of their kind in nearly forty years. The office building that initially threatened Fifth Avenue will now contain the desired retail space, and residential units to boot. Third, there are no allegations that the ordinances in effect have had any restricting impact on development (although there has often been considerable opposition to their initial enactment). Fourth, there is growing interest in an experimentation with the technique nationwide, and, perhaps most significantly, New York, the city with the greatest amount of experience to date, is continuing to design new special districts (for example, the new Special Park District) in additional areas of the city. Although the San Francisco ordinance has not been in force long enough to offer a fully considered verdict, the results thus far provide a base for optimism. There has been a significant shift in development to the formerly "undesirable" south side of Market Street, no modifications in the ordinance are planned at present (aside from supplementation with height and bulk regulations, as already noted), and developers are responding by attempting to take maximum advantage of the bonuses offered, without seeking special relief through variances or otherwise.

On balance, it appears very likely that "incentive zoning" will evolve from an innovative, experimental technique to become a component of the zoning controls of most major American cities. It thus seems worthwhile to examine the content and the record of incentive zoning ordinances now in effect with a view to preventing unnecessary failure or error in the design of an ordinance for Boston, if that step is to be taken.





### C. Prerequisites for Success

There are a considerable number of policy issues to be faced in weighing the potential utility of incentive zoning for Boston: what objectives to seek, what areas to concentrate on, what procedures to employ. But before these can be considered, a more fundamental question has to be answered: can this approach be made to work here? An analysis of the experience of New York and San Francisco with incentive zoning provides a reasonably complete set of guidelines through which this question can be answered. Based on an examination of that experience, five prerequisites can be set forth for the successful implementation of incentive zoning. These prerequisites, which are discussed briefly here as a preparation for an examination of actual conditions in Boston today, are:

1. Legality
2. Development pressure
3. A plan with appropriate objectives and means
4. Workable, equitable procedures
5. Effective administration

#### 1. Legality

Any proposed ordinance must of course be within the constitutional and statutory powers of the city. In practice, this is not a difficult test to pass, and though there is no binding judicial precedent, the entire legal history of zoning, in the nation as a whole and in Massachusetts in particular, as well as the weight of legal commentary on incentive zoning thus far, supports the conclusion that properly drawn incentive zoning ordinances will be upheld. But it is appropriate to specify legality as a prerequisite, for it does impose limits on what can be done -- placing restrictions on the objectives that may be sought (in the first instance,



through the general "public purpose" test applied to zoning) and excluding constitutionally deficient procedures. Perhaps the most important specific test of legality that may arise in a test of incentive zoning concerns the nature of the amenities or other requirements that are demanded in return for increased density allowances; the strongest case for legality is presented where such bonus features directly ameliorate the impact of increased density on the site or its immediate vicinity.

## 2. Development pressure

As has already been noted, there must be a sufficient market demand to support development pressures for increased intensity; unless increased density is of immediate and actual value to developers, they will not be motivated to take advantage of the incentive options. Although this is clearcut in principle, it presents difficult (though hardly insuperable) practical problems. First, although there is clearly a minimum market demand level below which no system can function, the existence of development pressure is a "chicken and egg" question, since it is directly related to the basic FAR restrictions put in effect. If the base FAR is set too high, there may be a very great amount of development that goes on, without ever necessitating use of the incentive provisions. If it is too low, it may unnecessarily restrict development, especially on smaller sites. The question then, is not an abstract one, but a practical, even technical one of determining the most satisfactory base FAR. In addition, the extent of development pressure is not susceptible to direct, "scientifically objective" measurement. There is frequently a considerable division of opinion on the actual strength of the market at any given time. Public agencies hoping



for the best and individual developers seeking the most responsive, least restrictive development context assess the situation very differently. Moreover, real estate development is in many ways a conservative field of endeavor, devoted to minimizing risks and uncertainties, and developers who have become familiar with conditions as they are may be resistant to any proposals for changes in the status quo, even potentially favorable changes; this may affect their public assessment of the extent of present and projected development trends. The city is justifiably concerned over its continuing fiscal squeeze, and may itself be reluctant to impose even potential obstacles to continued full and rapid office development, one of the few present sources of economic strength. Moreover, the office space market can be very volatile, swinging from tight to overbuilt in the course of a few years. In regard to these last points, however, it should be noted that even if current weakness in the market is established, it is not necessarily an obstacle to the design and even the implementation of an incentive zoning system, but may in fact be an opportunity to develop a sound ordinance in a less crisis-ridden atmosphere. San Francisco's ordinance was in fact developed in anticipation of a stronger market that would develop as planned transportation linkages came into effect.

### 3. A plan with appropriate objectives and means.

Because of its direct and apparently simple method of operation, there is the real risk in designing an incentive zoning ordinance that attention will be concentrated on the individual bonus features to be included and the bonus amounts to be granted at the expense of the overall planning context. In some special cases, where the objective can be narrowly and



specifically defined -- for example, the New York Theatre District zoning -- this may cause few if any problems. But as the New York "plaza bonus" illustrates, discussed in detail in the previous section (see Sec. II (B) (3), "Results to date"), inadequate consideration of the broader context can lead to very unsatisfactory results. Planners in New York and San Francisco have learned from this experience, and the ordinances designed since then have begun with an explicit determination of the objectives to be sought, which is only then followed by a careful examination of the various specific means (amenities, locational preferences, etc.) that could be used to achieve those objectives. This is a planning process, and has often in fact proceeded within the context of the preparation of a formal "plan" for the district in question. Those involved in the incentive zoning process emphasize that such consideration of the entire context is a very important element in the development of a successful ordinance, and that the objectives chosen should:

- o be clearcut and comprehensible;
- o be practical and attainable;
- o bear an appropriate relationship to the problems raised by increased intensity or development; and
- o be likely to obtain community and, if possible, developer support.

A corollary guideline is that the means selected to attain the objectives -- the required bonus features -- must meet the same general tests, and cannot be so numerous or complex that they will produce confusion, conflicts or a diffusion of impact in the utilization of the incentive option.

Three other points should be raised in considering the desirability of an appropriate planning effort. First, the plan should maximize





flexibility, and be able to respond to rapidly changing conditions in the city itself. The recently announced decision in New York City to make the million-dollar "Master Plan" inoperative is perhaps the most visible evidence of the shift in city planning away from physically determined, architecturally rendered "end state" plans. The "plan" that supports an incentive zoning ordinance with broad objectives should be one with stated planning goals, and specific means to achieve them, but one that is capable of adjusting to observed changes in patterns of development, and one that as far as possible relies on and responds to the initiatives of the private market in terms of location of use types. Second, the bonus computations within the ordinances should be designed so that they will change automatically, or can be changed, to keep them in line with conditions in the market. This can be accomplished through escalator provisions tied directly to relevant construction cost indicators, for example, or can be undertaken through required periodic review of both the specifics of the bonus calculations and the actual use and results of the bonus provisions. Finally, quite aside from the question of the likely successful functioning of an ordinance, its development in the context of and in relation to a planning effort will reinforce it against legal attack, in view of the well known line of decisions emphasizing the legitimacy of zoning ordinances based on a locally prepared plan.

#### 4. Workable, equitable procedures

This guideline bears directly on the "technical" problems that must be resolved in the design of the ordinance, several of which should be highlighted. One very important one has already been noted: the calculation



of an appropriate base FAR, low enough to make the incentive provisions attractive, not so low as to unduly restrict development. In addition, the proper relationship must be established between the size of bonuses allowed and the qualifying amenities, so that it will be sufficient to induce developers to make the expenditures and take the risks involved, but not so great as to amount to an undue giveaway. Both the base FAR and the bonus:amenity relationships must be developed in relation to the selection of an absolute maximum FAR that cannot be exceeded. And, as noted, these provisions must be revised as frequently as is necessary to keep them in line with conditions in the market.

These are at heart technical matters. The experience of both New York and San Francisco demonstrates that the tasks involved are within the range of planning capabilities. They are neither mystifying nor unduly complex or sophisticated. A more general consideration -- and perhaps even a more important one -- is the need for procedures that will encourage participation by developers, rather than put them off. This means, in addition to substantive attractiveness in the calculation of available bonuses, the design of a process that has maximum clarity and ease of utilization. Most of the important issues to be resolved here have already been noted in the discussion of the issues in approach to ordinance design: "automatic" v. "discretionary" operation, the "case" v. the "district" approach, etc. Each should receive careful attention in the development of an ordinance likely to work under conditions in Boston.

#### 5. Effective administration

Effective administration is only possible if workable procedures are



provided, but it goes beyond that prerequisite. Two questions have to be resolved: the competence of the agency administering the provisions, and the formal and informal limits on that agencies powers.

The competence question is an important one, and it should be made clear that it is "relative" competence that is the problem at hand. Most city agencies are admittedly less experienced and less sophisticated than real estate developers in undertaking negotiations and in understanding the details of modern development financing techniques. This may be an additional argument for the preference for "automatic" procedures, where the details of the trade-offs are established in advance. In San Francisco, the specifics of the relatively "automatic" provisions were worked out with the primary assistance of an economic development consultant. Even in New York City, with city agencies that are probably the most sophisticated in these areas, the officials responsible for implementation frequently rely on informal consultation with "friendly" developers (not involved in a particular application) to obtain satisfactory results. Indeed, the Theatre District has been in part successful because of a special Ford Foundation supported "Theatre Projects Committee" that provides expert advice in the negotiations over individual proposals. A relatively "discretionary" ordinance is therefore likely to work -- in Boston or anywhere else -- only if the city agency responsible for its implementation is assured of the necessary expert support.

An equally important question related to the position of the administering agency in the hierarchy of land-use controls in the city. Stated bluntly, incentive zoning will be severely handicapped, and may not



function at all, if there are methods outside its procedures through which developers can obtain equivalent density increases without meeting the requirements that the ordinance provides. In New York, for example, a developer made an end run on the Lincoln Square Special Zoning District by appealing directly to the Board of Appeals for a variance that would allow him the increased FAR without providing the amenities required by the special district. This problem is hardly unique to "incentive" zoning provisions. The relationship between the enforcement of zoning codes and the role of zoning boards of appeal has been a delicate and often difficult one in many cities, and it has frequently been charged that boards of appeal (also known as boards of adjustment) abuse their discretion in authorizing variances, creating "loopholes" that are antithetical to sound planning practices. This has proved resistant to attempts at solution through the design of ordinances and procedures; and the presence in Boston of a number of routes to development approval (discussed in the following section) may further complicate this situation. In any event, it is clear that without the full support of all of the City agencies involved, and in particular the Board of Appeals, no incentive zoning ordinance -- no matter how carefully designed -- will be free from the threat of detrimental and perhaps fatal leakage and undercutting.

o Approaching the problem in Boston

To see whether these prerequisites can be met in Boston, and what type and form of ordinance would be most effective, it is of course necessary to examine the Boston setting in detail. But in relation to what problems, and what areas? It is significant that thus far the incentive zoning





approach has been implemented primarily in situations where a problem had already been defined or recognized, and a solution was needed: the threat that the direction of office development in New York City presented to the theatre district and Fifth Avenue retail area, or the overall problems identified in the course of the comprehensive downtown zoning study in San Francisco, for example. In Boston, the question has been posed differently, and we are compelled to consider incentive zoning as a solution in search of a problem.

The examination of the use of this technique elsewhere has demonstrated that it can be applied to achieve a wide variety of objectives. There are additional situations that have not been considered here, and the range of conceivable uses is of course virtually endless. How can this proliferation of possibilities be brought under control for the purposes of this analysis?

To make this initial study as pertinent and productive as possible, it has been oriented through the aspect of incentive zoning ordinances currently in effect that is a functional common denominator: the provision of space bonuses for major commercial office development. This is not to say that the technique cannot be adopted, for example, to the situation of high-rise development in residential areas. But thus far office development has been the most important context of the use of this technique, and understandably so, for hi-rise office development is the most powerful competitor for land -- the "highest and best use" -- in the downtown areas of virtually all central cities today. At the present time, it might not be inaccurate -- and, in fact, might be appropriate -- to



recognize "incentive zoning" as a short form of a longer description, which might read in full, "incentive zoning for commercial office development." Whatever the particular objectives that individual ordinances seek to attain, high-density office development is for the most part the source of the leverage through which they operate and, perhaps as frequently, the source, or at least a part, of the problem they seek to resolve.

In recognition of this, the remainder of this report is concerned with examining the potential role of incentive zoning in relation to high intensity office development in downtown Boston. Section III, which follows here, is a description and analysis of the situation in Boston today; in section IV, incentive zoning is considered in relation to that setting.



### III. THE BOSTON SETTING



### III. THE BOSTON SETTING

#### A. The Evolution of Zoning Controls

1. "Pre-history": the development of the 1924 Zoning Code
2. "Phase 2": the post-war experience
3. The new zoning code: 1965 and after

#### B. Actual Development Patterns

#### C. The Status of Controls Today





## A. The Evolution of Zoning Controls

There is a noteworthy consistency in the history of development controls in Boston that bears directly on the questions raised by incentive zoning. Repeatedly, a central issue -- and perhaps the central issue -- has been an attempt to find the most satisfactory balance between two often conflicting objectives: the need to encourage economic development, and the need to protect and enhance the city as a physical and social environment, now often referred to as the "quality of life", but a continuing concern in Boston's land use control history. But it is not an easy matter to strike such a balance, particularly where market conditions change far more rapidly than the controlling ordinances.

### 1. "Pre-history": the development of the 1924 Zoning Code

"In Boston . . . the skyscraper problem has already been solved --  
by preventing it . . . ."  
-- Report of the City Planning Board, 1924

Initial efforts in Boston to impose governmental controls on development were directed towards the question -- still controversial today -- of building heights. In 1896, the Board of Park Commissioners imposed a 70 foot building height maximum along Commonwealth Avenue. In 1898, height restrictions were established for buildings in Copley Square. In 1904, a more comprehensive enactment divided Boston into two height districts: in the "A" district, where the majority of buildings were used for business purposes, a maximum of 125 feet was set (raised to 155 feet in 1923), while the "B" district, where most buildings were residential, the limit was 80 feet (100 feet on wider streets).



By 1915 the City Planning Board expressed its dissatisfaction with the results of these relatively modest development controls, and formally recognized both the need for "scientific regulation in the growth of the City" and the lack of legal power to impose the necessary controls. Examples of greater scope were not hard to find. The idea of separating a city into different "use" districts had received its first significant acceptance in Los Angeles in 1909, and was soon combined with height and area regulations in the first "comprehensive zoning ordinance" in New York City in 1916. Massachusetts moved swiftly to avail itself of the new technique. The power to establish use districts was granted to the General Court by an amendment to the state constitution in 1918 -- interestingly enough, in a referendum that passed statewide with a two-to-one margin, but in Boston with a four-to-one margin. Four years of work, begun by the City Planning Board in 1920, supplemented and supported by the efforts of a broadly representative city Zoning Advisory Commission formed in 1922, and delayed and complicated by the requirement for action by the state legislature, finally led to the enactment of the city's first comprehensive zoning code in 1924.

The 1924 Code established six use districts (from single residence to unlimited) and five height limit districts (from 30 to 155 feet), combined into 17 overall district types (see Appendix C ). Density controls were effected through the combined effect of the height limits and lot coverage and related spatial restrictions in the code (set-backs, yards, etc.).

The City Planning Board explicitly recognized that

"one of the big problems which Boston faces today, as one of the leading cities in the United States, is the



adjustment of its business and industry to the physical layout of the city," \*

and in drawing district lines it sought to accomodate and encourage economic development by placing most of the downtown area within the maximum allowable height (and therefore density) restrictions (155 feet), and the remainder within the second highest (80 feet). But it is clear that these maximum limits were well below the engineering capabilities of the day: the 32-story Custom House Tower had been erected in 1914, and major office buildings in New York City provided any number of examples of the potential of the "skyscraper." Thus the 1924 Code was a direct and quite explicit attempt to resolve the conflicting claims of economic development and the physical shape and experience of the downtown area for residents. The position finally adopted by the city was set forth clearly in the City Planning Board's report presenting the new Code:

"As a new type of architecture had developed in New York as a result of the zoning regulations applying to the height of buildings, in Boston, where the skyscraper problem has already been solved -- by preventing it -- a new way of further developing an old city may result, a city with its buildings spread out to allow fresh air and sunshine to enter and with sufficient space between structures to permit the planting of trees, grass and flowers so that every man, woman and child may inherit their natural birthright to a fair share of light and air and access to the earth itself." (p. 34, Zoning for Boston)

2. "Phase 2": the post-war experience

"Changes in the functions of the City have outmoded the 1924 zoning . . . . The City is confronted with a need for even more sweeping changes in the future if it is to successfully meet

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\* Page 15, Zoning for Boston, A Survey and a Comprehensive Plan, Report of the City Planning Board, Boston, Massachusetts, 1924, including Chapter 488, Acts of 1924.



the demands for living and doing business in the second half of the twentieth century." -- Report of the City Planning Board, 1958

Dissatisfaction with the 1924 Code grew in the post-war years as new development trends and techniques evolved. By 1953, the City Planning Board in a public report, recommended a major revision of the code, and specifically suggested a shift from height and coverage restrictions to the newer, more flexible "floor area ratio" limits already in use in other cities. But at the same time, the Board's study of non-residential development in the core of the downtown area led it to the conclusion that the density limits implicit in the 1924 Code were far higher than actual development experience had required. As it noted in its report,

"There is overwhelming evidence that past building here, as in the balance of the city, has been at markedly lower floor area ratios than the zoning permits, and that the most recent construction is even lower than that of the past. Downtown, for example, the highest floor-area-ratio found for post-war construction was below 8.0, where zoning allowed about 15.0." (Page 16, Zoning Policies for Boston, City Planning Board, Boston, Massachusetts, December, 1953)

As can be seen on the map reproduced here from that report (Fig. 2, page 48 ), development density was far below the 1924 maximums, and decreased in relation to distance from the city core, in a manner that can be summarized in the following table:

Post-war non-residential construction (to 1953)

Mile distance  
from downtown  
Boston ("rings")

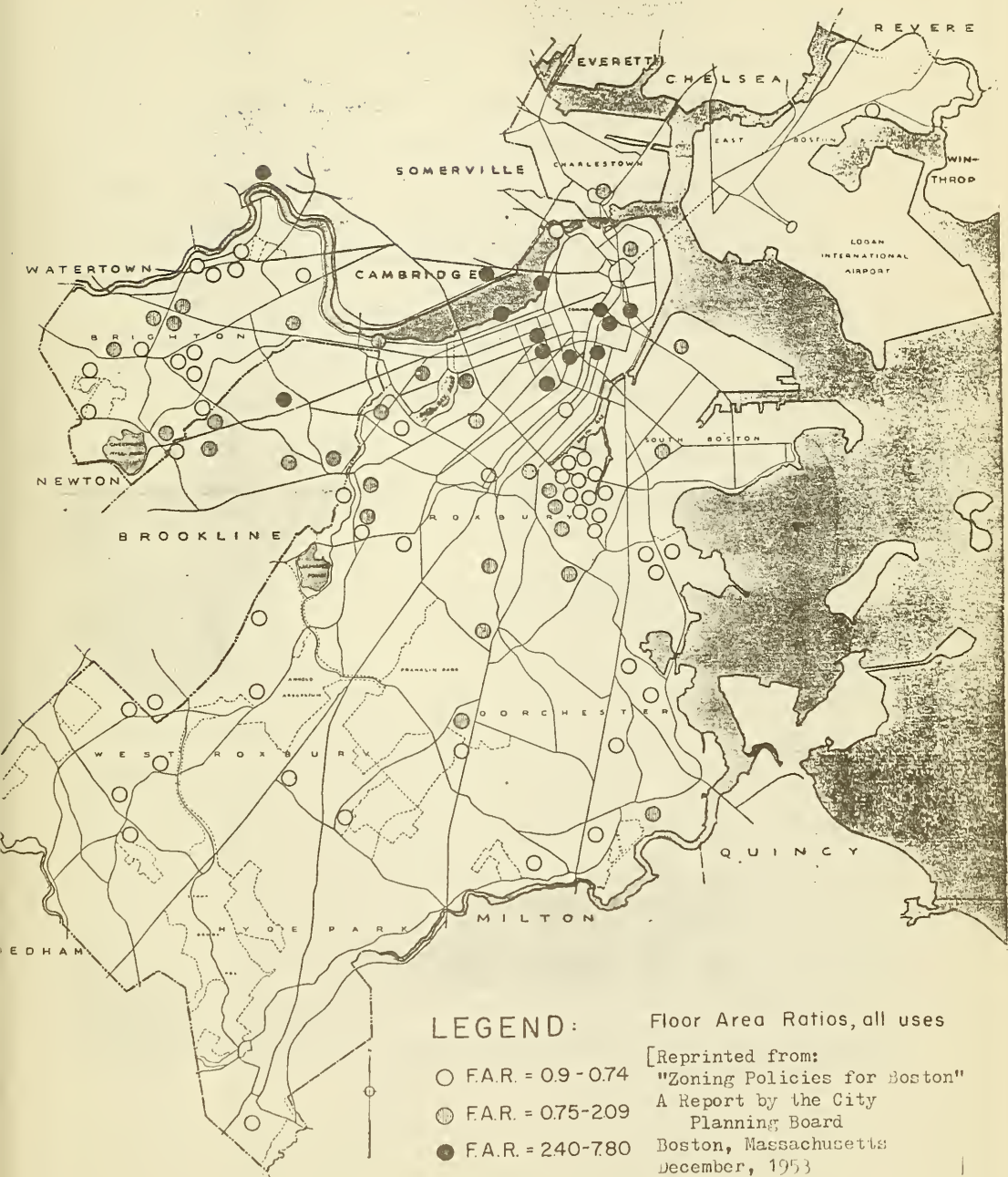
Median Density (in FAR)

0 - 1	2.5 - 5
1 - 2	less than .75
2 - 3	.5 - .75
3 - city limit	less than .5





Figure 2



FLOOR AREA RATIOS of MAJOR POSTWAR BLDGS.



The Report suggested four objectives to be served by the revised zoning, of which the first two, by now familiar, were "to promote" new construction and investment and "to protect" existing good development and induce desirable forms of new development. It proposed five general policies for a revision of the zoning code that would achieve this:

- o to regulate bulk through FAR controls;
- o to set the FAR limits lower than those implicit in the 1924 code;
- o to recognize a long range development trend towards lower densities;
- o to set design standards no higher than those in effect in the competitive suburbs; and
- o to establish districts so that FAR would reduce in direct relation to distance from the city center.

Specifically, the report recommended that FAR in general for most of the city be set at 2:1 or less, and that in central Boston the following limits be established:

<u>Predominant use</u>	<u>FAR (possible range)</u>
Office Buildings	5 - 8
Retail Stores	3 - 5
Elevator Apartments	2 - 3
Factories and Warehouses	2 - 4

This 1953 report can be taken as the formal initiation of a widely-supported campaign to revise the 1924 code, an effort that took over eleven more years to reach fruition. A new enabling act, shifting authority for zoning controls in Boston from the state legislature to the city itself, was passed in 1956 (Ch. 665, Acts of 1956), but it required two more years for the City Council to give its approval as required by the state enactment. That same year, 1958, the City Planning Board made possible a draft of a proposed new zoning code in a report to Mayor Hynes. That report expressed



an urgent need for revision of the existing controls in no uncertain terms:

"Changes in the functions of the City have outmoded the 1924 zoning. Metropolitan growth trends have altered ideas of how certain intown areas will and should develop. Many parts of the City have completely changed character. New methods of building design and construction, and new practices in building economics have made obsolete the 1924 standards -- for heights of buildings, density, spacing, and other features. Changes in the average size of the family and other social changes have outdated large residential areas, and the zoning that now regulates them. The motor vehicle has changed the way in which people live and do business. The City is confronted with a need for even more sweeping changes in the future if it is to successfully meet the demands for living and doing business in the second half of the twentieth century. One of the most critical needs is the attraction of new building and investment capital to bolster the shrinking tax base and support an adequate level of municipal service."

(Proposed Zoning, A Report by the  
City Planning Board, Boston, Mass.,  
May, 1958)

The "sweeping changes" set out in the proposed draft built directly on the major recommendations made in 1953, including the shift to FAR as a density control, the reduction of the maximum FAR limits from those effective in the 1924 code, and the inclusion of requirements for off-street parking and loading facilities. The new FAR limits as proposed were not as stringent as those suggested in 1953, but were significant; the proposed maximum FAR of 10:1 could cut as much as one-third off the limit under the 1924 code. Among other major substantive changes in the proposed code, a new set of district types were established, combining use and FAR restrictions and subject in part to separate height limitations, and the "conditional use" approach, discussed earlier in this report, was introduced.

This proposed zoning code, with some changes, was finally approved for



Boston, and its acceptance marked an important advance over the 1924 Code, not only in its substantive provisions but in its procedural revisions as well. It established a separate Zoning Commission with the power to redraw district lines and change the text of the ordinance (subject to Mayoral approval), a Board of Appeals with the increased flexibility of the conditional zoning provisions and a broad range of specific grounds for granting changes on appeals, and a staff and advisory roll for the planning arm of the city (now exercised by the Boston Redevelopment Authority). But it did not go into effect until December 31, 1964 -- over six years after its formal presentation by the Planning Board, and more than eleven years after the 1953 Board report that had publicly recommended many of its major features. By that time, the "new" code, for all its improvements over the "outmoded" 1924 ordinance, may have already been obsolete itself in an essential respect: regulation of the intensity of office development. The 1953 report had found "overwhelming evidence" from which to conclude that development was in fact occurring far below the maximum intensity limits established in 1924. By 1965, the first year that the new code was effective, conditions in Boston had changed substantially, and the emerging trend of office development was in exactly the opposite direction: towards far higher FAR's than had ever been previously experienced, exceeding not only the nominal limits of the new code but the more permissive 1924 Code as well.

### 3. The new zoning code: 1965 and after

"The sharp increase in construction between 1965 and 1970 was not anticipated . . . and at present no contingency plan exists to deal with this growth." -- BRA Downtown Study, 1969

The new code imposed maximum FAR limits of 8:1 and 10:1 on downtown Boston (see map, fig 2), but specifically provided two means through which





those limits could be increased for office development. These were in the form of bonus provisions of the incentive zoning type, allowing additional floor space where the development site adjoined existing open space or in return for the provision of off-street parking facilities. In the B-10 district, each offered a maximum increase to 12:1, and, if development qualified for both bonuses, a potential total of 14:1. (See excerpts from Article 15 in appendix). No height limits were specified for commercial development in the downtown districts, and development in B-8 and B-10 districts was exempted from mandatory off-street parking requirements (Sec. 23-6); parapet set-back limits (Article 21) and requirements for the provision of off-street loading bays in proportion to increasing gross floor area (Article 24-1) were imposed, along with other siting regulations. The BRA was assigned a very specific staff role, including mandatory and optional activities, in support of both the new Zoning Commission (map and text revisions) and the Board of Appeals (appeals for variances and exceptions).

Boston thus had a new, more comprehensive, more flexible, more modern zoning code. Unfortunately, it was still not prepared for the development patterns that emerged at the time this new code went into effect. First, the sheer amount of aggregate development greatly exceeded all past experience, as can be seen in the following table:

Net Increment, Office Space, Boston  
New Construction Less Demolitions  
(Millions of Square Feet)

<u>Period</u>	<u>Net Change</u>	<u>Average Annual Increment</u>
1929-50	+ 0.7	0.035
1950-60	+ 0.9	0.090
1960-65	+ 1.9	0.380
1965-70	+ 5.2	1.040

Source: Boston's Development Prospects, BRA Research Development, Jan. 1973.



Second, the high-rise office tower, that "skyscraper" once successfully excluded from the city, became an increasingly primary mode for new development, and along with it came sharp increases in development intensity. The Prudential Tower, opened for occupancy in 1965 (coincidentally, the first year in which the new zoning code was in effect), might be identified as the opening wedge of this important change. That building was itself made possible by the special provisions of Chapter 121A (Seciton 13, Mass. General Laws) carried over in Section 15-6 of the new code, which establishes special FAR provisions for eligible Chapter 121A projects calculated in reference to the entire 380,000 square foot site, its million square feet of floor area has an overall FAR of only 2.6. But much of the development that followed involved proposed high-rise construction of comprable scale on sites far smaller and, consequently, at FAR's exceeding the limits established by the new code.

There were two parallel responses to these new market forces. On the one hand, an effort was made to amend the new code so that it might be flexible enough to accomodate appropriate new forms of development. On the other hand, developers went directly to the Board of Appeals to obtain the right to higher FAR's and the variance of other restrictive code provisions. The result was that development in Boston increasingly took place beyond the nominal limits of the code, through the "exceptions" permitted under amendments and the "variances" applied for directly. In this situation, it becomes difficult to say what the effective zoning controls actually are in downtown Boston at the present time.

Changes in the code. There were two important amendments to the code



that came within a few years after it was put into effect. Both were in the nature of "floating zones" that could be mapped wherever prerequisite conditions were met. The Urban Renewal Area (U) district was a response to the need for a more flexible planning tool to deal with the large number of parcels made available through urban renewal and designated for private redevelopment. In the mid-sixties, half and more of new development was taking place on such sites. These projects were by definition required to conform to the specific design and land use controls established by the renewal plan and imposed by the BRA; the U district provided a means for avoiding the repetitive and less flexible limits specified in the zoning code. Eligible sites are essentially exempted from many of the specific code provisions in return for submission to the detailed specifications of the BRA "design review" process -- with the significant exception of use and FAR restrictions. These can be varied only by action of the Board of Appeals on an appeal for an "exception" as set forth in Section 6A-1 of the code, discussed below.

The second amendment was intended to respond to the need for greater flexibility in handling major private development proposed outside of urban renewal areas and without the benefits of Chapter 121A, a need demonstrated in 1967 by difficulties encountered in arranging for development of the proposed new Hancock Building. Under the Planned Development Area (D) district provisions added to the code in 1968, a site is eligible for designation as a D district if it is not less than one acre in size and if the developer submits to the requirements imposed by the BRA; this involves specification of development interests and financial arrangements as well as a review and



and approval of virtually all physical details of the proposed development. With BRA approval, the developer can then apply for "exceptions " to all applicable code restrictions through the provisions of Article 6A.

Appeals for variances. With the effective termination of urban renewal at the federal level, it is this Planned Development Area procedure that offers the most important formal method for inducing development that best fits the city's needs. And on its face, it offers important advantages to developers. Although it requires considerable cooperation with the BRA, it provides a possible means of obtaining BRA support for increased development intensity, and along with it a significant relaxation of the apparently stringent standards for receiving Board of Appeal approval for increased FAR under the "exception" procedures of Article 6A, applicable for both Urban Renewal and Planned Development Areas, the code sets out the following test:

SECTION 6A-3. Conditions Required for Exception. The Board of Appeal shall allow an exception only if it finds:

(a) That such exception is in harmony with the general purpose and intent of this code; and

(b) The exception requested is in conformity with (i) the development plan for the planned development area or (ii) the land assembly and redevelopment or urban renewal plan, or the low rent housing project or housing project for elderly persons of low income for the urban renewal area, and such conformity has been certified by the Boston Redevelopment Authority.

This is in sharp contrast to the standards applicable to a private developer who does not come within the purview of these sections. In that case, the path to increased FAR and relief from other applicable restrictions is an appeal for a "variance" under Article 7, and the code provides a standard that would appear to be considerably more difficult to meet:





Section 7-3. Conditions Required for Variance. The Board of Appeal shall grant a variance only if it finds that all of the following conditions are met:

(a) That there are special circumstances or conditions, fully described in the findings, applying to the land or structure for which the variance is sought (such as, but not limited to, the exceptional narrowness, shallowness, or shape of the lot, or exceptional topographical conditions thereof) which circumstances or conditions are peculiar to such land or structure but not the neighborhood, and that said circumstances or conditions are such that the application of the provisions of this code would deprive the appellant of the reasonable use of such land or structure; and

(b) That, for reasons of practical difficulty and demonstrable and substantial hardship fully described in the findings, the granting of the variance is necessary for the reasonable use of the land or structure and that the variance as granted by the Board is the minimum variance that will accomplish this purpose; and

(c) That the granting of the variance will be in harmony with the general purpose and intent of this code, and will not be injurious to the neighborhood or otherwise detrimental to the public welfare.

In determining its findings, the Board of Appeal shall take into account: (1) the number of persons residing or working upon such land or in such structure; (2) the character and use of adjoining lots and those in the neighborhood; and (3) traffic conditions in the neighborhood.

Practice under the code, however, places in doubt the strictness with which this nominally stringent standard has been applied. The Board of Appeals has been generally receptive to developers' requests for relaxation of code restrictions, and the major office buildings in downtown are characterized by substantially higher FARs, and frequently by reduced setback and off-street loading bay requirements as well. This study is not a suitable forum for evaluating the underlying legitimacy of this course of practice; but it can be noted that the results are often considerably in excess of the applicable FAR under the code. For example, according to the appeal file on the Keystone Building (BRA Zoning Files, Z-1253), the



code provisions would allow construction of a maximum of approximately 400,000 gross square feet (based on a full FAR of 14 on the 28,676 square foot site). The developer appealed for a variance, citing unforeseen foundation costs due to subsoil conditions and land assembly costs higher than original estimates, and arguing that greater bulk would be necessary to avoid financial hardship. The Board of Appeals responded by allowing 764,650 gross square feet (an effective FAR in excess of 26:1, nearly twice the nominally applicable limit), reducing the off-street loading bay requirements from 8 to 4, and relaxing the set-back requirements in view of the site's proximity to open public ways. The Board's opinion found this size and scale to be appropriate because it would be consistent with nearby buildings, including new construction underway, a factor specified in the code and frequently cited in Board findings. But the use of recent new development in the area to justify higher FARs suggests that approval of such higher intensity development is becoming its own justification for further development of this nature, a bootstrap argument that may be effectively undermining the code itself. This very important problem is not limited to the question of variances. In the case of the National Shawmut Bank of Boston Building, for which exceptions were approved through the Planned Development Area provisions, allowing an increase of FAR to 19 from an otherwise applicable limit of 12 (File Z-2384), the BRA itself argued that the increased scale was appropriate in light of the similar FAR of the nearby First National Bank Building. Thus even if earlier high-FAR approvals may have been granted on questionable grounds, they now serve as the basis for the continuation of development at the same scale. And the effects go beyond the question of



establishing a "neighborhood" environment of high-FAR buildings; as will be noted later, continued approvals of increased FARs through exceptions and variances may be directly reflected in increased land prices, creating a real and direct basis from which future developers may argue for variances based on financial hardship. The extent to which this pattern has already been established can be best considered by an examination of actual recent development trends in the downtown area.

It must be noted that the resources available for the present study permitted only limited direct investigation of these recent trends and of underlying zoning experience and practices in Boston. Considerable reliance was necessarily placed on relatively accessible data and on information derived from existing secondary sources. The conclusions suggested in this and other sections of the report must be taken in light of these limitations. If further action is to be taken, particularly in the context of the type of planning and zoning design effort recommended in this report, a fuller consideration of these issues might well be indicated, along with an examination of possible associated changes in present administration procedures and structures that were beyond the scope of this study.



## B. Actual Development Patterns

On an individual, case by case basis, there is often justification for allowing some increase in the development limits imposed on a particular site. And the city's concern for its economy, its definition of a pressing need for new construction and for expansion of its economic base, cannot be ignored. But recent major development has taken place to a great extent at levels of intensity far beyond those envisioned by the designers of the present zoning code, as can be seen in the table on the following page (fig. 3). A fair description of the present state of affairs can be found in the Downtown Design and Development Study completed by the BRA in the summer of 1969; conditions have, if anything, become more acute since then:

"The sharp increase in construction between 1965 and 1970 was not anticipated by any of the earlier downtown renewal plans, and at present no contingency plan exists to deal with this growth. Its impact on the historical and architectural character of the city is well known. As is said, 'They're pulling down Boston and putting up something else.' Moreover, public improvements cannot keep pace with this growth in a coordinated way, and the zoning code is subject to continual appeals for variances."





Figure 3

Selected Major Office Development  
Existing and Proposed  
Boston, Mass.  
1965 and After

<u>Building</u>	<u>Gross Square Feet</u>	<u>Estimated FAR</u>	<u>Height (in stories)</u>
Prudential Tower	1,000,000	2.6	52
Center Plaza (1, 2 & 3)	750,000	5	9
State Office	600,000	3	22
Federal Office	800,000	4	26
New City Hall	500,000	4.2	9
State Street Bank	850,000	17	33
New England Merchants Bank	800,000	25	40
Boston Company	825,000	20	41
First National Bank	1,460,000	18	37
Keystone	765,000	26	32
Hancock Place	2,100,000	11	60
Employers-Commercial Union	1,300,000	21	40
60 State Street	970,000	18	44
National Shawmut Bank	1,050,000	19	(530 feet)

Sources: BRA Zoning Files  
The Codman Company, 1971 Summary of  
New Competitive Office Buildings in Greater Boston  
BRA Downtown Design and Development Study, 1969  
Unpublished Research Report, BRA Research Department, 1973



### C. The Status of Controls Today

The zoning controls presently in effect in downtown Boston provide a number of routes through which a developer can seek to increase the potential of his site, specifically in terms of exceeding the base FAR's in the B-8 and B-10 areas. They can be summarized as follows:

1. Development up to applicable zoning limits, with bonuses provided under Article 15 (abutting open space and off-street parking, Sections 15-2 and 15-3);
2. Direct appeal to Board of Appeals for variance of FAR limits (Article 7);
3. Planned Development Area provisions (Article 6A);
4. Urban Renewal subdistrict provisions (Article 6A);
5. Chapter 121A developments (Section 15-6); and
6. Request for revision of zoning boundaries (Section 3, Chapter 665, Acts of 1956).

Each of these provisions was devised to respond to a particular set of problems and needs. Seen in this way, they could be considered to establish a sufficient range of alternatives to accomodate changing market needs. But there are two essential deficiencies. First, they do not, at least in terms of the results that have been reached, reflect the city policy to limit the intensity of development that was implied by the provisions of the new zoning code and that was in fact an explicit consideration in the design of those provisions. Second, they are not linked together by any unifying policy, let alone formal procedures, through which overall objectives for the downtown area can be imposed or even articulated. Even where there are formal or informal processes through which the city can affect the shape and content of development on an individual site -- for example,



through the design review process that applies automatically in Urban Renewal and Planned Development areas -- this is done for the most part through consideration of the site and the immediate surrounding area; and reference to broader goals must be on an ad hoc basis. The BRA did make an attempt to establish overall planning goals in its 1969 Downtown Study, but the means for imposing those goals were not at hand -- specifically, funds for publicly sponsored pedestrian improvements and the two part "base and tower" type of office construction, favored in other cities, that was hypothesized in that set of proposals. The tendency continues for each situation to be considered primarily and perhaps exclusively in relation to the conditions of the specific site and in relatively narrow terms of building design and site planning. Thus the proliferation of different devices, each satisfactory itself, and the lack of a context in which to evaluate aggregate results, has led to a situation in which the high-intensity development demanded by the market place has emerged in the absence of an effective means for imposing a unified city policy. At least as regards intensity of development, it is possible to conclude that zoning today is relatively ineffective, if it is operative at all, and falls far short of its potential as a means for implementing city policy. It is in this setting, and with a recognition that continued high-intensity development appears likely, that the city should now consider the possible revision of the existing code provisions and the possible utility of incentive zoning in Boston.



#### IV. INCENTIVE ZONING FOR BOSTON?





#### IV. INCENTIVE ZONING FOR BOSTON?

##### A. The Potential Impact

1. Estimating the value of potentially available bonuses
2. "Supplementary" benefits
  - a. Consistency of objectives
  - b. Consistency of trade-offs
  - c. Improved planning capacity
  - d. More effective resource allocation

##### B. Meeting the prerequisites: can it work here?

1. Legality
2. Development pressure
3. The missing ingredients

##### C. The Direction of Effort

1. "Sites" v. "the city": the effect of past action
2. The minimum goal: rationalizing controls
3. Issue list: questions to be answered
  - a. How much development, at what pace?
  - b. What type of plan, through what devices?
  - c. What is the priority area of concentration?
  - d. What development controls should be revised, and how?
  - e. How can developer participation be maximized?
  - f. What are the priority objectives, and how can they be implemented?

##### D. Next Steps: Tasks and Participants



## A. The Potential Impact

When "reform" is in the air, there is a tendency to blow overly hard on the trumpet. Proposals for changes in governmental institutions and procedures, even those as seemingly mundane as zoning ordinances, tend to be accompanied by exceedingly optimistic forecasts of their likely effect, and equally lively visions of the holocausts that are imminent if the proposed reforms are rejected. This can be seen in some of the earlier reports recommending revisions in Boston's codes, quoted in this study. Thus experienced readers of such proposals may fairly apply a substantial discount factor to the claims advanced.

Nevertheless, it is necessary to provide some estimate of the possible effects of an incentive zoning approach in Boston, and that is the purpose of this section of the report. It is not the simplest of tasks. Aside from the intrinsically speculative nature of such an effort, it is further complicated by the lack of explicit planning goals in Boston that has already been described. At this stage of consideration it is probably not appropriate to specify a particular objective or set of objectives (e.g., more plazas or theatres) against which to weigh the prospects of success and likely costs and problems of such a zoning change. In light of this, two more basic areas of possible "impact" are examined here. The first is the question of the magnitude of additional resources that might be made available to the city -- that is, the question of the actual dollar value to the city of amenities and improvements that might be provided by developers in return for space bonuses. The second is a necessarily more general discussion of what are here called "supplementary" benefits, the



substantive and procedural improvements in the city's planning processes that might be implemented through a change to an incentive zoning approach. Although no attempt has been made to put dollar figures on the effects of such improvements, many of them might be as financially important as the "direct" benefits provided in the form of amenities, or more so.

1. Estimating the value of potentially available bonuses.

As should be clear by now, incentive zoning establishes a base FAR and allows additional intensity only in return for the provision of stipulated amenities or improvements by the developer, or for development in preferred locations. The additional space built, and even the right to build such space, has a very real value. But it is frequently and understandably difficult to obtain agreement on the dollar amounts involved. This is true even in a specific individual case, and the problem of estimating the potential total available pool over a period of years from the city's point of view is obviously open to even greater dispute.

Such disagreement, when and if it arises, cannot be easily dismissed as politically motivated. Any estimate of the "value" of possible new office construction in Boston in excess of nominally applicable FAR is necessarily subject to attack on a number of substantial grounds. In the first place, the calculation involves the selection of values for a number of factors -- rental rates, construction costs, capitalization rates and the like -- which are subject to a variety of individual judgements, and which change substantially over time. The likely amount of development in the future is of course open to even wider dispute. A "base" must be chosen to determine what amount of development is in "excess", and this presents specific



problems. More generally, the exercise must answer the question of what the city might get -- or have gotten -- in return for allowing the "excess" development had how much development there would be under such restrictions; especially for any retroactive analysis, this is obviously a highly speculative procedure, with the answer a hypothetical one at best. Finally, the scope of the present study has not allowed for the effort necessary to produce fully reliable results.

But even with these limitations, an attempt to estimate this "value" can provide at least a rough estimate, an order of magnitude, that may help to make the discussion of incentive zoning a less abstract one. For that reason such an effort has been made in the present study. To make this estimate as useful as possible, attention has been directed primarily to actual recent office development rather than to projections of future development. The results are necessarily hypothetical, since there is no assurance that this development would have taken place in the same degree under the different conditions intrinsic to an incentive zoning ordinance; but it does allow for a realistic approximation of how much of this new development exceeds a given base FAR, and it makes the use of recent market costs and prices not unreasonable.

The procedure followed involved two steps: first, an estimate of the "excess" FAR granted, in net rentable square feet, for major downtown office buildings, completed in or after 1968 or in active development stages at the present; and second, a calculation of the "gross" and "net" values of this development from the city's perspective -- that is, the (gross) full value of the space to the developer, and the (net) portion





that might have been received by the city in the form of amenities provided under an incentive zoning ordinance (assuming all bonuses are provided for such amenities, and holding aside the question of "locational" bonuses). This procedure is more fully described in Appendix D, but a few further points should be noted here. The amount of "excess" space allowed has been derived for the buildings listed in that appendix, all located within the downtown area, which are the major actual and imminent private developments significantly exceeding base FAR's. The "excess" was calculated under two alternative assumptions: first, that the base FAR for all buildings was the base limit for those buildings under the current zoning code without allowing for use of the off-street parking or abutting open space bonuses now in the code; second, that the base FAR for all buildings was the maximum (i.e., 14 in a 10 area) allowed for any building under the present code. Valuation of this "excess" space was made through a residual land value capitalization, and the apportionment of that value was made on the assumption that a net bonus of 50% over cost would be necessary and appropriate to induce developer participation -- that is, that the total value of the excess space to developers would be 150% of the estimated cost to them of the qualifying amenities. (San Francisco's initial bonus estimates assumed a range of 150.- 200%, while New York City's bonus provisions, according to sources directly involved in those computations, are closer to 125%; it should be noted that neither involves any estimate of the value of the benefits available to developers as a result of provisions of the federal income tax.)



Subject to the further qualifications discussed in the description of the valuation procedure in Appendix D, the resulting estimates of value can be summarized as follows:

Value of Excess Space Granted  
Selected Major Downtown Office Buildings  
1968-1975 (approximate)  
Total Gross Square Footage:

	<u>Assumed FAR Base (Existing Code)</u>	
	<u>No Article 15 Bonuses (base 10)</u>	<u>Full Article 15 Bonuses (base 14)</u>
Gross Value: (full value of additional space to developers)	\$ 36,000,000	\$ 21,000,000
Net Value: (estimated value of amenities that might have been provided under an incentive zoning ordinance)	\$ 24,000,000	\$ 14,000,000

It must be clearly recognized that the utility and accuracy of this estimate is dependent on the particular assumptions that have been made in the calculations and on the general assumption that development of this scope would have taken place under an incentive zoning ordinance. But with these limits, the results are indeed useful. They suggest that if development is likely to continue at the 1968-75 rate, there is a sufficiently large amount of resources available to make the effort and expense of a code revision worthwhile, simply in terms of the direct benefits that the city



might reap through amenities provided. As an extension of this calculation, an estimate of the pool of available resources in the near future can be made, on a very rough basis, by deriving from the foregoing figures the overall ratio of bonus value to gross square footage, and applying that ratio to projections of the amount and space of future development. Thus a recent publication of the BRA Research Department (Boston's Development Prospects, January, 1973) projects 12 million square feet of new office space under construction, planned and proposed for the period 1973-78. If private construction proceeds at half that rate, and the derived value:square footage ratio (on the "base 10" assumption) is applied, the "gross" value to developers of the bonus space (in present dollars) would be approximately \$27,000,000 and the "net" value of amenities to the city under an incentive zoning ordinance during that five year period would be approximately \$18,000,000.

## 2. "Supplementary" benefits.

It would be simply inaccurate to state that recent high intensity office development in Boston has proceeded in the absence of city efforts to obtain value in return. The "Planned Development Area" provisions of the code were specifically designed to assist the city in shaping such private development to best meet city needs, and the BRA has imposed design review requirements both formally and informally on a considerable proportion of total development. But as has been suggested, it appears that these efforts, in part because of the very nature of the legal powers underlying them, have proceeded with an emphasis on problems raised by individual buildings and sites, and with less than full consideration of the overall context of downtown development. Against this, the implementation of a formal incentive zoning procedure can be seen to offer four possible benefits:



a. Consistency of objectives. An incentive zoning ordinance requires prior agreement on and stipulation of a set of objectives to be sought in all development situations in the defined area, and thus increases the likelihood of a mutually supportive and possible greater cumulative effect of individual contributions;

b. Consistency of trade-offs. The bonus:amenity relationships are specified in the ordinance and automatically applied with uniformity to all development, reducing and perhaps eliminating not only disparities in the treatment of different developers but also the possibility that individual developments might pass through without providing an appropriate level of public benefits;

c. Improved planning capacity. Thus far, the city has been compelled to respond on a case-by-case basis to individual development proposals, mustering whatever staff capabilities are on hand to undertake necessary negotiations; in designing an incentive zoning ordinance, with provisions that would apply to all major development over a number of years, the city would be justified in making, and perhaps even compelled to make, a more extensive and better-funded effort, with the assistance of economic and development consultants where appropriate, to calculate specific bonus:amenity relationships and select preferred objectives;

d. More effective resource allocation. All three of the previous benefits -- the consistency of objectives, the consistency (and probable maximization) of trade-offs, and the improved planning capacity intrinsic to the necessary ordinance design effort -- would





contribute to an increased effectiveness in the city's allocation of the resources made available by intensive office development. The San Francisco experience is a good example of how the implementation of an incentive zoning almost necessarily involves a choice among the wider range of potential objectives, and a final selection of those goals with the highest priority.

It would not be impossible, of course, to obtain these benefits without reliance on an incentive zoning ordinance, at least to a degree that represented some improvement over current conditions in Boston. The planning effort, the choice of objectives, improved resource allocation -- all of these might be undertaken as an informal adjunct to the administrative provisions now in effect. Nevertheless, it seems fair to conclude that a revision of the zoning code to include an incentive zoning ordinance could insure a unified consideration of all of these factors, offers a formal means for achieving them, and may in fact be the only way that such improvements as consistency of trade-offs can be effectively implemented. And there is at least one additional benefit that the introduction of such an ordinance might well yield, a benefit of no less importance than those already discussed: an improved development climate in Boston, an increased degree of predictability of requirements and certainty of approval procedures and time periods that could make Boston a more attractive and more competitive location in the development market.

On balance, then, it appears that this approach has important benefits to offer Boston. The next question is: can it be made to work here?



B. Meeting the prerequisites: can it work here?

In a previous section of this report (see page 33 and following), the experience of other cities with incentive zoning was translated into five "prerequisites" for successful introduction and functioning of an incentive zoning ordinance. An examination of the situation in Boston suggests that these tests can be met.

1. Legality. Zoning regulation as an uncompensated exercise of the police power has been upheld for an ever-widening variety of "public purposes" and technical arrangements since the federal constitutionality of the power to zone first was recognized by the U.S. Supreme Court in the Euclid decision in 1926. The considerable efforts of New York City, San Francisco and other cities to implement incentive zoning for more than a decade suggests a widespread belief that this approach meets the tests involved, and no independent analysis of this aspect of legality was undertaken for this study. Of course, any specific ordinance proposed for Boston would have to meet the general tests of the exercise of zoning power, in relation to the purpose of the provisions and to procedural requirements. And one particular problem may arise in the design of the ordinance: the base FAR, if it is set overly low, might be subject to attack as confiscatory beyond the limits of the police power. However, this probably would not be the case as a practical matter, particularly in light of the comparatively low base FAR in the present code (FAR of 10 in the most intensive development districts, compared with 14 in the revised San Francisco ordinance). It should be noted that no attack has been made on the constitutionality of any of the ordinances in other cities discussed here. For a full discussion of issues involved, see Elliott and Marcus, "From Euclid to Ramapo: New Directions in Land Development Controls," 1 Hofstra Law Review 56 (1973).



Any ordinance must also meet the requirements of the Massachusetts State Constitution and be within the power of the city under zoning enabling legislation. Although there is no case directly in point, it is significant that the closely related technique of "conditional" zoning has been specifically upheld in the Commonwealth (Sylvania Electric Products, Inc. v. City of Newton, 344 Mass. 48, 193 N.E.2d 118 (1963)). Moreover, the present Boston Zoning Code currently includes bonus provisions that reflect the two most critical aspects of incentive zoning ordinances, obviously in the belief of all those involved that these are appropriate under the state constitution and the existing zoning enabling legislation for Boston. Section 15-2 provides for increases in maximum floor area ratio for the inclusion of off-street parking facilities, a direct precedent for provision of bonuses in return for "amenities" in new development. Section 15-3 provides for increases in FAR where there is abutting public open space, a direct precedent for "locational" bonuses. Each of these sections specifies the amount of bonus floor area to be provided in relation to the conditions of the development proposal, and in addition Section 15-4 establishes maximum floor area ratios for each base FAR district under each applicable section of Article 15 and under all sections taken in aggregate. Thus the zoning code now in effect has included prototypical incentive zoning provisions for over eight years. In this light, it appears reasonable to conclude that although no complete analysis of cases under the existing code and enabling act has been made, it appears reasonable to conclude, in light of the foregoing, that there is no obvious legal obstacle at the present time to the development of a more comprehensive set of incentive zoning provisions for Boston. One



other concern should be noted in addition. As has been pointed out, there is a relatively extensive pattern of the granting of variances by the Board of Appeals for FAR's considerably in excess of the limits imposed by the present zoning code in the downtown (B-10) districts, frequently in the apparent absence of any compelling showing (at least in the records) of the conditions requisite for such increases. Aside from the practical effect that this may have in raising expectations in the development community, it raises the spectre of legal challenge to the existing code: either a challenge of the legality of past and future approvals of such increases, or a claim by a developer in the future that in view of its past decisions the Board of Appeals may not deny him a substantial increase over nominal limits. Without considering the essential validity or probable results of such attack, it may be fairly said that under the present state of affairs the zoning code as applied to downtown Boston has had at least some significant holes punched in it, and may at some point begin leaking like a sieve. The development of an incentive zoning provision for the area in question may be the most direct and effective way of rectifying this situation and preserving the legality as well as the effectiveness of practice under the code.

2. Development pressure. It is difficult and perhaps impossible to say with an acceptable degree of certainty whether there will be sufficient development pressure to allow an incentive ordinance to function. The demand for new office space is subject to considerable periodic variation as a result of a number of factors beyond public control, and unexpectedly sluggish development trends have left several of the innovative ordinances





elsewhere in an unresolved condition. The hazards involved are even more acutely illustrated by the difficulties encountered by the proposed "Battery Park City" redevelopment in downtown New York City. Originally designed to provide a broad range of public amenities that would be financed through the inclusion of profitable office space, the project was delayed in execution so long and the office market changed so radically for the worse in the interim that this approach had to be abandoned.

But incentive zoning is not as exposed to risk to the same extent as an integrated redevelopment project dependent upon office construction. If office demand is insufficient to stimulate development, there is no particular or additional failure involved beyond the slow pace of growth itself. Where no high-density development is forthcoming, there is less need, or none at all, for the density-ameliorating amenities that the ordinance provides. When demand increases again, the ordinance is available to take appropriate advantage of it. And though it is obviously a subject on which there are different views, there is reason to believe that there may be a strong office market in Boston by the time a new ordinance would be put into effect. In the first place, Boston has the advantage of a relatively low base FAR in the existing ordinance; if this was retained in the revision, it would increase the likelihood of their being "sufficient" development pressure to trigger the provisions. (San Francisco's ordinance involved a reduction of base FAR to 14 from the previous 16, a concession hard won against resistance from the development community and a final city council vote of 6-to-5 approving the ordinance.) A city official closely involved with both the design of that ordinance and responsibility for its



continued implementation has suggested that a further reduction of the base to 10 or at least 12 might be the single most desirable and appropriate change in the existing ordinance. Second, a recent BRA Research Department report, already cited, has estimated that development under construction and in planning will total approximately 12 million square feet of additional office space in the period 1973-78. Even discounting for optimism, this suggests considerable strength in the market in the near future. Moreover, even if the total square footage of new space falls off, there is the real possibility that a major portion of it, particularly in the downtown area, will be centered in high-density buildings, and thus result in substantial utilization of the incentive provisions. Finally, as previously suggested, the shift to an incentive zoning provision with relatively "automatic" features might have a favorable effect on the Boston development market itself. Thus there seems on balance to be a relatively good chance that there would be sufficient development pressure to allow an appropriately drawn ordinance to function successfully -- for example, an ordinance retaining the existing base 10, and providing relatively "automatic" features -- and little if any likelihood that such an ordinance would have a negative effect on development trends.

3. The missing ingredients. In the first section of this report, three elements in addition to legality and development pressure were suggested as probable prerequisites to effective incentive zoning: appropriate objectives and associated amenities in the context of a plan; workable procedures; and effective administration. In the situation in Boston today, these additional requirements must quite clearly be considered as missing



ingredients that will have to be supplied as part of any effort to develop an incentive zoning ordinance. Of course, this is almost by definition the case for the "workable procedures" that would be needed to implement the new zoning; there are useful guidelines that have already been discussed in this regard, and the nominally automatic operation of the bonus provisions in the current code provide a practical precedent. The extent to which an effective and a more unified administrative context can be established is almost to the same degree a question that cannot be answered before the attempt is made; there is no necessary obstacle to it, aside from the inevitable question of cooperation with and from the Board of Appeals, but the specific changes to be made and the probability of making them can only be determined as part of the effort at revision of the existing code. Both the introduction of the 1924 Zoning Code and the major reworking of the Code in 1964 suggest that these tasks are certainly within the city's ability, though they raise questions as to how expeditiously the city can act.

The third element -- the need for a planning effort that results in a clear statement of objectives -- raises a more general question of the city's readiness and willingness to act. To the extent that the present zoning code is understood to embody Boston's land-use planning goals, the inescapable conclusion is that the highest public priority at present for downtown Boston is the provision of additional off-street parking facilities, and that the most desirable location for the highest-intensity office development is on the borders of existing open space. (And it must be recognized that the current effort to rescind the off-street parking bonus provisions eliminates even that as an objective.) If recent practice under the code



is also taken to reflect accepted goals, the city is committed to office development at an intensity far in excess of the apparent limits in the existing zoning, virtually without regard to the specific downtown location of proposed new development. Of course, the zoning code is not the only source or instrument of city policy; a considerable portion of BRA effort over the last several years has been directed towards the redevelopment of the Park Square area through methods quite distinct from zoning controls. And this report does not pretend to the level of research and analysis necessary to develop a new set of substantive objectives. But it is possible to observe that the goals currently reflected by the provisions and practice under the code fall far short of the comprehensive, integrated choice of priorities reflected in the Downtown Zoning District in San Francisco or the Special Greenwich Street Development District in New York City; that private development on individual sites will be a significant and perhaps the primary mode through which downtown Boston will be redeveloped in the next five to ten years; and that unless priority objectives are agreed upon and formally or informally included in development controls, the city will be defaulting on a major opportunity to affect the emerging form and content of its central core.

None of this is necessarily beyond the city's power or ability. Boston can have an improved set of development controls, and specifically a comprehensive incentive zoning ordinance, though not without effort. The remaining sections of this report provide an outline of the direction that such an effort might take and the questions that it must answer.





### C. The Direction of Effort

#### 1. "Sites" v. "the city": the effect of past action

There is an understandable desire on the city's part to pose the least necessary restraints on the office development that is one of its few major sources of continuing economic growth. But the resolution of the conflicting interests of economic growth and urban environmental quality now takes place within an overly restricted context of concentration on the limited problems presented in any particular proposed site. High-density development is allowed with only a few ameliorating requirements that for the most part do not go beyond the immediate questions of building design and siting, and this is the context that must be changed. Whatever specific objectives are given priority, the thrust of the effort at revising controls should be to shift the focus of concern from individual development sites and their immediate surroundings to the needs of the city as a whole -- and more specifically, to the needs of the downtown areas in which development is concentrated.

This shift has a sound economic rationale behind it; it is not just a planner's dream. The individual developments, welcomed at present for their economic benefit, may in aggregate, in terms of overloaded city facilities, unnecessarily confused pedestrian and traffic patterns, and a deterioration of the overall attractiveness of the downtown area, cost the city more than they are worth. Perhaps as importantly, the present practices may be unintentionally yet unavoidably creating a situation that is to an increasing extent beyond the city's power to control. Repeated approvals of high FAR's in the downtown area establish a level of expectation in the development



community, beyond any considerations of apparent legality, that can be directly reflected in higher land prices. To the extent that this is true, any "less intensive" development on such sites -- that is, development at the nominally applicable zoning limits under the existing code -- might indeed impose an economic hardship justifying a variance, or, expressed more neutrally, might create a situation in which the refusal to allow higher FAR's would substantially or indefinitely delay further development. The present study has not included any direct investigation of this possible effect of past zoning practices, which should be on the agenda of future research. And even if such a relationship can be demonstrated, increased land prices are by no means preclusive of continued or revised controls on development rights; land development is an intrinsically speculative venture, and the risk of changes in the nature and extent of development controls, and specifically zoning, must be regarded as inherent in the business. But as a practical matter, the receptiveness of the development community to proposals for change is an important element affecting the speed and extent to which such proposals are realized, and the sooner the city acts, the better the prospects for improvement, and the lesser the likelihood that necessary changes will have detrimental effects on existing private interests.

## 2. The minimum goal: rationalizing controls

It may be worth restating once again that the primary recommendation of the present study is for an immediate effort to revise the development controls affecting downtown Boston to achieve two results: first, to reach agreement on the priority objectives to be sought; and second, to establish a more rational network of controls with a greater likelihood of



achieving those objectives. This does not necessarily require the use of an incentive zoning approach, although this may be desirable, it does offer important advantages over less formal, less integrated approaches, and should definitely receive full consideration. It does require a planning effort of significant and appropriate scale committed to investigating the impacts of high-density development in the downtown area and improving the city's present abilities to deal with those impacts. Even the brief review in this report of past city efforts at development control demonstrates the extent to which the task of finding a balance between economic development and environmental quality has been a repeated and central city concern. Conditions change, and no particular solution can be effective permanently; it is once again time to review and revise the means of establishing a proper balance.

### 3. Issue list: questions to be answered

Incentive zoning does tend to be identified with the specific, often narrow objectives that final ordinances establish and the particular amenities and improvements through which they are implemented: theatres, plazas, landmark preservation and the rest. But these must be defined in relation to answers to a relatively comprehensive set of questions concerning the public interest in future development trends. At a minimum, the planning effort recommended in this report should provide a response to the following questions:

a. How much development, at what pace? Although office construction is a highly-valued ingredient in Boston's recent and present economic profile, it would be shortsighted to undertake a downtown



planning effort, particularly one looking towards a possible incentive zoning plan, without examining the costs and benefits associated with continued development of this nature. Intensive development in San Francisco has led that city to begin an overall re-evaluation of the net benefits involved, and there should be a full consideration of such diverse concerns as the increased load capacity of city services and utilities, the home residence of those employed in new buildings, and the impact on commutation loads and patterns. A good example of the specific questions to be raised here is that of the amount of development that each downtown area can absorb before present public service capacities are overloaded; many such services do not expand gradually to meet increasing demand, but instead can only be increased in quantum steps involving investment in major capital improvement programs. Moreover, incentive zoning as implemented in New York and San Francisco is of course not necessarily applicable to conditions in Boston. There are important differences that can already be specified: the overall development pressure is far lower in Boston than in New York, and both the possible economic utility and the environmental impact of each new building is much greater here; Boston's downtown exhibits a less distinct and less stable division into use types (office, retail, etc.) than San Francisco's, a higher degree of current uncertainty as to the direction and rate of change, and does not pose the specific opportunities and problems that San Francisco faced in preparing for the impact of the new Bay Area Rapid Transit system. Although there is a recognizable concern at the present time that the basic problem





is whether there is in fact sufficient development in Boston, not whether there is too much, the entire question deserves more detailed consideration than has been accorded it, and the need to investigate the upper limits of potential development, and to establish city policy as to the amount, distribution and pace of development that is desirable in, for example, the next five to ten years, should not be overlooked.

b. What type of plan, through what devices? The need for a "plan", or at least a planning effort, as it has been referred to here, has to be taken in reference to the overall shift in recent years away from the "end-state", physically and architecturally defined "master plan" to more flexible and more frequently reviewed statements of goals and objectives. Perhaps the best illustration of this trend is the recent public abandonment of the multi-million dollar master plan for New York City, which had been finally completed and published only a few years ago. Thus a review of downtown development controls will have to consider the most appropriate means under present conditions for stating and implementing objectives that are agreed upon. In this regard, incentive zoning does provide several advantages that might be briefly noted here. First, incentive zoning ordinances, though implemented through specific locational and amenity requirements, do lend themselves to a more flexible planning approach. Although a few specify actual improvements to be made in considerable locational detail, as in the pedestrian connections required under the Greenwich Street district plan, most provide for considerable discretion and flexibility



on the developer's part in the choice of the type of amenities to provide and their particular location and design. In addition, many include specific provisions mandating periodic revision of the bonus: amenity formulas in relation to changing conditions in the market. Significantly, they begin by effectively requiring the city to define its priority objectives in any particular area, and then to specify the means to be used in achieving them; both of these can be opened to periodic re-evaluation and change within the overall framework of the ordinance. And although they do involve an effort to channel and shape development, such ordinances quite clearly work in response to actual development trends; they cannot be arbitrary attempts to posit a "plan" that does not respect the real limits imposed by the nature and direction of private development.

c. What is the priority area of concentration? At least in theory, incentive zoning could be applied to attain a wide variety of objectives in many different parts of the city. For example, it might be used in any area of the city with the potential for high-rise apartment development. But it is not unreasonable to conclude that the broader the scope of consideration, the longer will be the time required for changes in development controls. The long period required for the last overall revision of the zoning code well illustrates this. Because of this, because incentive zoning has thus far been most successfully emphasized in the context of intensive office development, and because of the current situation in Boston, it is recommended here that initial concentration be placed on the revision of controls affecting the



central downtown core. The definition of the boundaries to be set is a task for the planning effort itself, but a reasonable initial target can be suggested: those areas in the central core within the present major B-8 and B-10 zoning districts (see map, in appendix

d. What development controls should be revised, and how? Incentive zoning itself functions primarily through density restrictions, imposed in Boston through FAR limits. But there are related controls that should also be re-evaluated. First, the related bulk controls. Site coverage limits are an important element in the Greenwich Street plan, and for a good reason. Both street-level and tower coverage restrictions have significant effects on development economics; and it can be noted that most of the appeals for variances and exceptions for major office buildings in downtown Boston have involved, along with increased FAR's, the waiver of applicable parapet restrictions. Similarly, the loading bay requirements of the present code are regularly and significantly reduced in the context of these appeals, and their reasonableness under present conditions should be reconsidered. Second, the question of height limits. This is a subject of considerable and growing concern in this city and elsewhere. San Francisco has found it necessary and appropriate to impose an overall set of height and bulk limits this year, above and beyond limits resulting from the incentive zoning provisions. Third, the city's ability and efforts to obtain the cooperation of potential development sources beyond the scope of its legal authority. In the context of the design of a more comprehensive system of controls, with more explicit objectives,



consideration should be given to the question of how future development by federal or state agencies or public utilities can be brought, as far as possible, to conform to the same requirements that are imposed on private developers. Fourth, although office construction is a primary focus, the possibility of further high-rise apartment development within the downtown core suggests that this should be brought within the scope of the planning effort, and possibly the revision of controls as well. In this regard, it is interesting to note that the Mayor's Council on Urban Design in New York City has recently presented recommendations for revised zoning controls that would reduce the amount of high-rise apartment construction, famous for sterile towers and little-used street-level open space, and attempt to induce in its place more liveable site designs with lower buildings at the same densities.

e. How can developer participation be maximized? The extent to which developers respond positively and actively to the opportunities presented within the framework of development controls is quite obviously an important factor, and perhaps the most important factor, in the success of those controls. At least to some degree, they have the option of passing up development opportunities in Boston in favor of alternatives elsewhere; and they have the additional option of attempting to avoid those controls or overturn them, through appeals for variances (as at present) or direct legal attack. The question of how developer responsiveness and participation can be maximized has to be given thorough and balanced consideration, and there are several guidelines that





have been strongly recommended by those involved with incentive zoning elsewhere. First, obtain developer participation in the process of designing revised controls. As has been already noted, the specifics of most of the New York City districts were worked out in the context of a specific development proposal on a specific site, and there is a general belief that this has been an important element in making the ordinances practical and effective. Second, design controls to provide the greatest possible degree of certainty to developers as to the substantive requirements and the method and time required for obtaining approval. It would appear that at least to some extent Boston now exercises influence over developers by presenting a situation of relative complexity and uncertainty, leading developers to the informal conclusion that they must somehow obtain city agency support in order to wend their way to a plan approval. Here the experience elsewhere is particularly suggestive of the direction of change. City personnel in New York and San Francisco contacted during this study were of the virtually unanimous opinion that relatively automatic and clearcut procedures were a most critical element in the success of incentive zoning plans. It may be especially significant that in San Francisco, where the revisions were initially opposed by the development community, experience since implementation of the new code suggests that developers have taken maximum advantage of the opportunities for increased density offered by that relatively automatic ordinance, and have neither sought to attack the provisions directly nor to avoid them by "end-run" appeals for variances. Third, with this in mind, consideration should be given



to the possibility of re-examining all codes and requirements now applicable to new development with a view to unifying and simplifying the process involved from the developer's point of view, and further reducing any unnecessary limits that the city itself places on the attractiveness of Boston as a development location.

f. What are the priority objectives, and how can they be implemented? It is not the function of this report to specify objectives for downtown Boston, and little can be said here beyond the statement of the question. But two observations may be appropriate. First, any effort will have to include a reconsideration of those objectives that are now reflected in existing development controls. There is effort already underway in that regard, specifically the proposals for the elimination of the off-street parking bonuses. Even if no general action is taken on the recommendations in this study, it would be neither difficult nor inappropriate to extend that present effort to a review of the current bonuses for development locations on abutting open space, an incentive provision of limited utility and questionable desirability. Second, the situation in Boston appears to be far closer to that of San Francisco, where a review of the entire downtown district yielded a set of fundamental objectives related primarily to pedestrian movement and accessibility, rather than that of the more specialized districts in New York, where in many cases the narrower objective of the ordinances was to protect specific use patterns (theatres, retail shopping continuity) threatened by emerging development patterns. As far as the selection of particular amenities or locational preferences,



the presence of relatively complex, narrow street patterns in the downtown area helps to emphasize the degree to which a true planning effort is necessary. The early unrestricted provision of bonuses for plazas in New York City proved to be less than successful in the context of a simple, straightforward grid pattern; any boilerplate effort to transpose provisions in effect elsewhere into a Boston ordinance is likely to lead to more problems than it solves. These past efforts elsewhere can and should be used for guidance, and the availability of this body of experience can appreciably shorten the time required for action here. But the choice of implementation modes for any incentive zoning ordinance -- or locational preferences and particular amenities and improvements -- should be undertaken with the same reference to specific conditions in Boston involved in a choice of objectives.



#### D. Next Steps: Tasks and Participants

The present study has been necessarily limited to an essentially preliminary investigation of conditions in Boston and the potential applicability of the incentive zoning approach. The conclusion reached here is that it is not only possible but highly desirable to go forward with a substantial commitment to the task of revising development controls for downtown Boston, and to consider reliance on incentive zoning as a primary element in such a planning effort. How can such an effort be organized and initiated?

As a result of the reforms that were part of the revision of the zoning code in 1964, the city can implement most necessary changes without need of action by the state legislature. Under those reforms, the Zoning Commission was given the power (subject to Mayoral approval) to revise the zoning text and map, and the BRA was designated to provide staff support for such revisions. Moreover, the BRA is also mandated to assist the Board of Appeals in making decisions on individual appeals, and has the general task of acting as the city's planning arm. Thus it appears to be the agency with the authority and the responsibility to take the lead in the effort proposed.





A two-stage approach appears most appropriate. First, a relatively short term, two to three month effort to develop a more complete project design, on the basis of the material presented in this report and supplementary material immediately available (including, for example, the "Boston Downtown Study" prepared by the BRA Urban Design Department in 1969; illustrative excerpts appear in an appendix to this report). This would include at least a preliminary statement of the city districts to be included within the study, the questions to be answered, and the probable participants, and might also include an initial outline of possible incentive zoning principles: that is, a relatively inclusive list of possible objectives and implementary amenities and locational preferences, (samples of ordinances in effect elsewhere are provided in an appendix to this report). This document would then be used as a basis to refine the final planning design, and to seek funding for the effort both inside and outside of city government. For example, negotiations with the development community might be initiated to obtain both participation in and financial support for the project.

The second stage would of course be the planning effort itself. At this point, little can be added to what has already been said in this report about the nature and content of that effort, but two points might be made in relation to its possible cost and the amount of time required. As to cost: the San Francisco planning effort that preceeded and accompanied the design of the Downtown Zoning District provisions is perhaps the most applicable model for the project proposed here. That effort involved expenditures



for outside economic and planning consultants of approximately \$120,000 and in-house efforts that brought total costs close to the \$200,000 level. Although Boston is in the favorable position of having a considerable body of expertise and experience to draw on that was not available at that time, the increase in professional costs since the completion of that project (1966) and the need to consider local conditions in detail and a possibly broader range of questions (for example, height restrictions) suggests that a comparable effort here might now require \$200 - 250,000. As to time: a project of the scope suggested, depending on the amount of support and the priority it receives, can probably be completed including a final set of proposed code revisions, within a 12 to 18 month period. If the city prefers to proceed primarily on the basis of information that is already available, (for example, the 1969 Downtown Study), without undertaking the full agenda of research proposed, to rely for the most part on in-house staff, and to commit itself in advance to the goal of designing an incentive zoning ordinance for the present downtown B-8 and B-10 districts within the framework of a few possible priority objectives rapidly chosen (e.g., pedestrian movement and amenities), it would be possible to have proposed revisions prepared within a considerably shorter time frame (perhaps six to nine months) and obviously at a significantly lower cost. The results might still provide a substantial improvement over current conditions, though they would leave major questions unanswered. The extent of the commitment that the city is willing and able to make, and the choice of whether to make any commitment at all, is the first question that will have to be answered.



## APPENDICES



## APPENDIX A

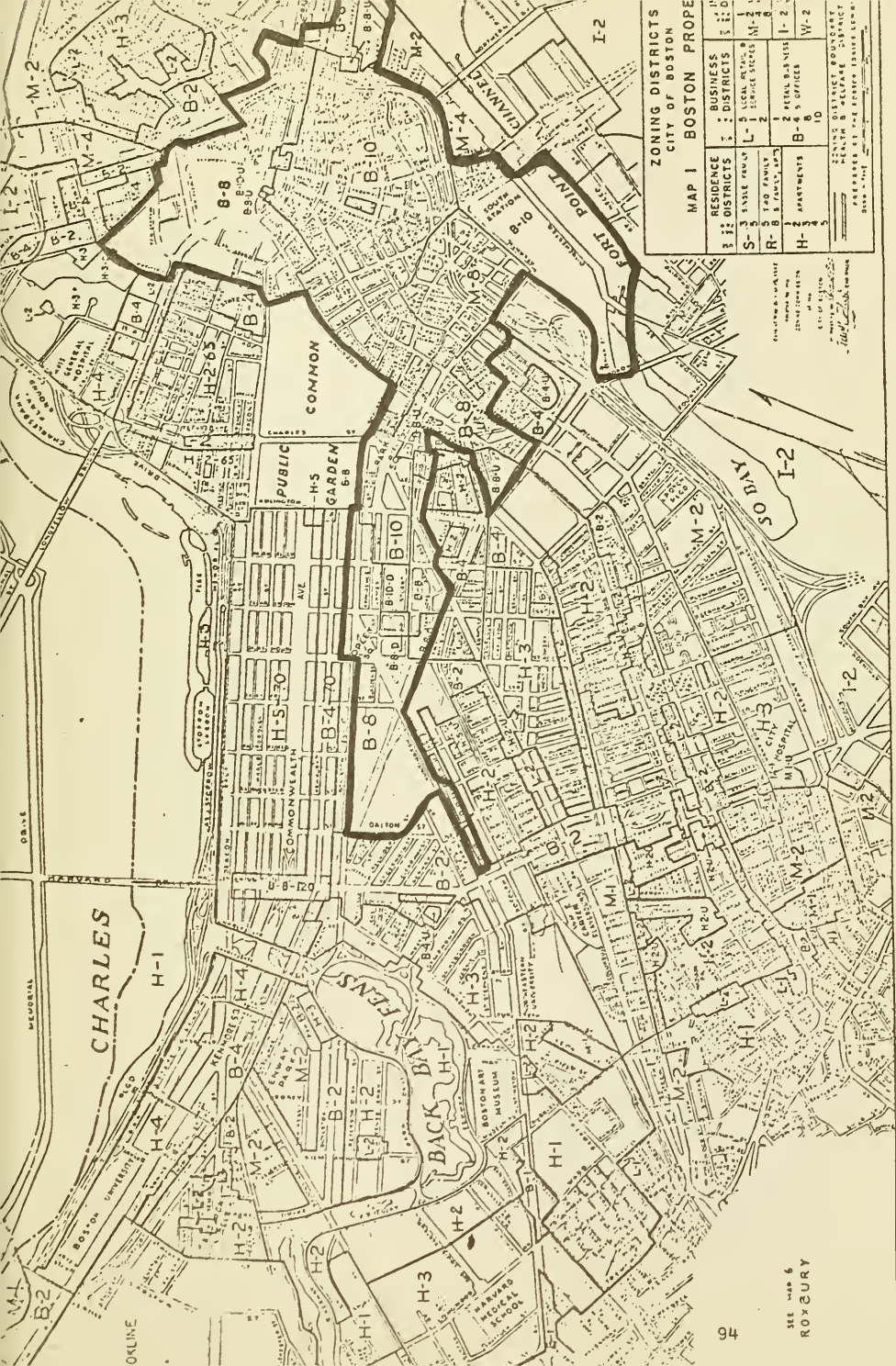




Appendix A: Map of Zoning Districts, Boston Proper

The map in this appendix shows zoning district boundaries for "Boston Proper" (Zoning Map 1). Contiguous B-10, B-8 and M-8 districts in the downtown area have been outlined in red to indicate the possible initial target area for zoning revision.





**ZONING DISTRICTS**  
**CITY OF BOSTON**

**MAP 1 BOSTON PROPOSED**

RESIDENCE DISTRICTS	BUSINESS DISTRICTS	INDUSTRIAL DISTRICTS
R-1	B-1	I-1
R-2	B-2	I-2
R-3	B-3	I-3
R-4	B-4	I-4
R-5	B-5	I-5
R-6	B-6	I-6
R-7	B-7	I-7
R-8	B-8	I-8
R-9	B-9	I-9
R-10	B-10	I-10
R-11	B-11	I-11
R-12	B-12	I-12
R-13	B-13	I-13
R-14	B-14	I-14
R-15	B-15	I-15
R-16	B-16	I-16
R-17	B-17	I-17
R-18	B-18	I-18
R-19	B-19	I-19
R-20	B-20	I-20
R-21	B-21	I-21
R-22	B-22	I-22
R-23	B-23	I-23
R-24	B-24	I-24
R-25	B-25	I-25
R-26	B-26	I-26
R-27	B-27	I-27
R-28	B-28	I-28
R-29	B-29	I-29
R-30	B-30	I-30
R-31	B-31	I-31
R-32	B-32	I-32
R-33	B-33	I-33
R-34	B-34	I-34
R-35	B-35	I-35
R-36	B-36	I-36
R-37	B-37	I-37
R-38	B-38	I-38
R-39	B-39	I-39
R-40	B-40	I-40
R-41	B-41	I-41
R-42	B-42	I-42
R-43	B-43	I-43
R-44	B-44	I-44
R-45	B-45	I-45
R-46	B-46	I-46
R-47	B-47	I-47
R-48	B-48	I-48
R-49	B-49	I-49
R-50	B-50	I-50
R-51	B-51	I-51
R-52	B-52	I-52
R-53	B-53	I-53
R-54	B-54	I-54
R-55	B-55	I-55
R-56	B-56	I-56
R-57	B-57	I-57
R-58	B-58	I-58
R-59	B-59	I-59
R-60	B-60	I-60
R-61	B-61	I-61
R-62	B-62	I-62
R-63	B-63	I-63
R-64	B-64	I-64
R-65	B-65	I-65
R-66	B-66	I-66
R-67	B-67	I-67
R-68	B-68	I-68
R-69	B-69	I-69
R-70	B-70	I-70
R-71	B-71	I-71
R-72	B-72	I-72
R-73	B-73	I-73
R-74	B-74	I-74
R-75	B-75	I-75
R-76	B-76	I-76
R-77	B-77	I-77
R-78	B-78	I-78
R-79	B-79	I-79
R-80	B-80	I-80
R-81	B-81	I-81
R-82	B-82	I-82
R-83	B-83	I-83
R-84	B-84	I-84
R-85	B-85	I-85
R-86	B-86	I-86
R-87	B-87	I-87
R-88	B-88	I-88
R-89	B-89	I-89
R-90	B-90	I-90
R-91	B-91	I-91
R-92	B-92	I-92
R-93	B-93	I-93
R-94	B-94	I-94
R-95	B-95	I-95
R-96	B-96	I-96
R-97	B-97	I-97
R-98	B-98	I-98
R-99	B-99	I-99
R-100	B-100	I-100

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DATE - 1914

FOR FURTHER INFORMATION  
SEE MAP 6  
ROXBURY



## APPENDIX B



## Appendix B: Excerpts from Boston Zoning Code

The following pertinent excerpts from the present Boston Zoning Code are provided in this appendix:

Article 3, Establishment of Zoning Districts  
(includes provisions for Planned Development  
and Urban Renewal Areas)

Article 6A, Other Exceptions  
(provisions for appeal for exceptions in  
Planned Development and Urban Renewal Areas)

Article 7, Variances  
(includes provisions of conditions required  
for appeal)

Article 13, Table B: Dimensional Regulations  
(provisions regulating FAR and other  
dimensional regulations)

Article 15, Building Bulk  
(general FAR requirements and provision  
for bonuses)

Article 24, Off-Street Loading  
(specifies applicable off-street loading  
bay requirements)





## ARTICLE 3.

## ESTABLISHMENT OF ZONING DISTRICTS

† SECTION 3-1. *Division of City into Districts.* For the purposes of this code the City is hereby divided into districts as follows: three classes of residential districts: S (single family), R (general), and H (apartment); two classes of business districts: L (local) and B (general); and three classes of industrial districts: M (restricted manufacturing), I (general) and W (waterfront); each of which is further subdivided into subdistricts identified by a number which represents maximum allowed floor area ratio, as follows:

(a)	<i>Residential Districts</i>					
	S-3	}		Single Family		
	S-5					
	R-5	}		General		
	R-8					
	H-1	}		Apartment		
	H-2					
	H-2-65					
	H-3					
	H-4					
	H-5					
	(b)	<i>Business Districts</i>				
		L-5			}	Local
		I-1				
		L-2				
B-1		}	General			
B-2						
B-4						
B-8						
B-10						
(c)		<i>Industrial Districts</i>				
	M-1	}	Restricted Manufacturing			
	M-2					
	M-4					
	M-8					
	I-2		General Industrial			
	W-2					
		Waterfront Industrial				

The boundaries of these districts are hereby originally established as shown on a series of maps entitled "Zoning Districts of the City of Boston", dated July 6, 1962, on file in the office of the City Clerk, which maps, with all explanatory matter thereon, and all maps which, by amendment of this code, may be substituted therefor or made supplemental thereto shall be deemed to be, and are hereby made, a part of this code.

Within any of the subdistricts indicated on said maps there may be created planned development areas (distinguished by the addition of the letter "D" to the designation of the subdistrict), and urban renewal areas (distinguished by the addition of the letter "U" to the designation of the subdistrict).

*Planned Development Areas.* The whole or any part of a subdistrict may be established as a planned development area if such area contains not less than one acre and the commission has received from the Boston Redevelopment Authority a development plan, approved by said Authority after a public hearing, for the development of the planned development area, singly or in connection with other planned development areas, provided, however, that no development plan shall be approved by said Authority unless said Authority finds that such plan conforms to the general plan for the City as a whole and that nothing in such plan will be injurious to the neighborhood or otherwise detrimental to the public welfare. Such development plan shall set forth the proposed location and appearance of structures, open spaces and landscaping, proposed uses of the area, densities, proposed traffic circulation, parking and loading facilities, access to public transportation, proposed dimensions of structures, and may include proposed building elevations, schematic layout drawings and exterior building materials, and such other matters as said Authority deems appropriate to its consideration of the proposed development of the area. To insure that no work proceeds other than in accordance with the development plan, no structure shall be erected, reconstructed or structurally changed or extended in a planned development area unless all drawings and specifications therefor shall have been subjected to design review and approved by said Authority. The Building Commissioner shall not issue any building or use permit with



respect to any building, structure, or land within a planned development area unless said Authority has certified on the application therefor and on each and every plan filed with the Building Commissioner in connection therewith that the same is consistent with the development plan for such planned development area. Except as otherwise provided in Article 6A, planned development areas shall be subject to all the provisions of this code applicable to the subdistrict in which the area is located.

*Urban Renewal Areas.* Upon application from the Boston Redevelopment Authority, the whole or any part of a subdistrict may be established as an urban renewal area if all land within such urban renewal area is the site of or for a low rent housing project, or a housing project for elderly persons of low income, or consists solely of land, including land under water, with respect to which an agreement has been entered into with said Authority establishing use and dimensional controls as specified in a land assembly and redevelopment, or urban renewal plan, as defined in Chapter 121 of the General Laws. Section 13-1 (except the maximum floor area ratio specified in Table B thereof), Sections 13-2 and 13-4, and Articles 14, 16, 17, 18, 19, 20, 21 and 22 shall not apply to urban renewal areas; but except as otherwise provided in Article 6A, urban renewal areas shall be subject to all other provisions of this code applicable to the subdistrict in which the area is located.

[‡ As amended on September 7, 1967 and April 30, 1968]

*SECTION 3-2. Interpretation of District Boundaries.* Where a district boundary is indicated on a map constituting part of this code as approximately following, or parallel to, the center line or side line of a street, highway, railroad right-of-way, or water course, such boundary shall be construed as following, or as being parallel to, such center line or side line. Where a district boundary is indicated on such a map as approximately following a lot line, such line shall be construed to be said boundary. If no distance is indicated on such a map for a district boundary running parallel to the center line or side line of a street or highway, such dimension shall be assumed to be one hundred feet from such line or, if as determined by the use of the scale shown on such map it is at least twenty feet more, or twenty feet less, than one hundred feet, it shall be as so scaled.



maps, or plans to aid the Board of Appeal in judging the appeal and determining what conditions and safeguards may be necessary or appropriate. The Board of Appeal shall not render a decision on an appeal for an exception until such report has been received and considered.

SECTION 6A-3. *Conditions Required for Exception.* The Board of Appeal shall allow an exception only if it finds:

- (a) That such exception is in harmony with the general purpose and intent of this code; and
- (b) The exception requested is in conformity with (i) the development plan for the planned development area or (ii) the land assembly and redevelopment or urban renewal plan, or the low rent housing project or housing project for elderly persons of low income for the urban renewal area, and such conformity has been certified to by the Boston Redevelopment Authority.

SECTION 6A-4. *Other Conditions Necessary as Protection.* In allowing an exception, the Board of Appeal may attach such conditions and safeguards as it deems necessary to insure harmony with the general purposes and intent of this code.

## ARTICLE 7.

### VARIANCES

SECTION 7-1. *Authorization for Variance.* As provided for in Section 9 of Chapter 665 of the Acts of 1956, as now in force or hereafter amended, and subject to the provisions of Sections 7-2, 7-3 and 7-4, the Board of Appeal may, in a specific case after public notice and hearing, grant a variance from the terms of this code; provided, however, that such grant shall lapse and become null and void unless such variance is used within two years after the record of said Board's proceedings pertaining thereto is filed in the office of the Building Commissioner pursuant to Section 8 of said Chapter 665.

SECTION 7-2. *Procedure for Appeal.* Each appeal for a variance shall be filed in quadruplicate with the Building Commissioner, who shall retain one copy for his files and transmit the other copies as follows: one to the Board of

## ARTICLE 6A.\*

### OTHER EXCEPTIONS

SECTION 6A-1. *Authorization for Exceptions in Planned Development and Urban Renewal Areas.* As provided for in Section 10 of Chapter 665 of the Acts of 1956, as now in force or hereafter amended, and subject to the provisions of Sections 6A-2, 6A-3 and 6A-4, the Board of Appeal may, in a specific case after public notice and hearing, allow an exception from the provisions of this code. Such exception shall lapse and become null and void unless used within two years after the record of said Board's proceedings pertaining thereto is filed with the Building Commissioner pursuant to Section 8 of said Chapter 665.

SECTION 6A-2. *Procedure for Appeal.* Each appeal for an exception shall be filed in quadruplicate with the Building Commissioner, who shall retain one copy for his files and transmit the other copies as follows: one to the Board of Appeal, one to the Boston Redevelopment Authority, and the other to the Zoning Commission. Said Authority shall, within twenty days after the date of such transmittal, file with the Board of Appeal a report, together with material,

\*Article added on April 30, 1963.



Appeal, one to the Boston Redevelopment Authority, and the other to the Zoning Commission.

In each of the following cases, the Boston Redevelopment Authority shall, within twenty days after the date of such transmittal, file with the Board of Appeal a report, together with material, maps or plans to aid the Board of Appeal in judging the appeal and determining special limitations and safeguards:

- (a) an appeal for the erection or alteration of a building to a height greater than that authorized by this code;
- (b) an appeal for a nonconforming use of land with an area of more than 20,000 square feet;
- (c) an appeal for a nonconforming use of an existing building or buildings with a gross floor area in excess of 2,000 square feet or a floor area ratio more than fifty percent greater than that permitted in the district in which it or they are located; and
- (d) an appeal for a commercial or industrial use in a residential district, on a parcel of land not previously used for a commercial or industrial purpose.

In any other case, the Boston Redevelopment Authority may, within twenty days after the date of such transmittal file with the Board of Appeal such a report in connection with the appeal for a variance therein.

The Board of Appeal shall not render any decision on an appeal for a variance until such report has been received and considered, provided that if no such report is received within said twenty days, the Board of Appeal may render its decision without such report.

**SECTION 7-3. Conditions Required for Variance.** The Board of Appeal shall grant a variance only if it finds that all of the following conditions are met:

- (a) That there are special circumstances or conditions, fully described in the findings, applying to the land or structure for which the variance is sought (such as, but not limited to, the exceptional narrowness, shallowness, or shape of the lot, or exceptional topographical conditions thereof) which circumstances or conditions are peculiar to such land or structure but not the neighborhood,

and that said circumstances or conditions are such that the application of the provisions of this code would deprive the appellant of the reasonable use of such land or structure; and

- (b) That, for reasons of practical difficulty and demonstrable and substantial hardship fully described in the findings, the granting of the variance is necessary for the reasonable use of the land or structure and that the variance as granted by the Board is the minimum variance that will accomplish this purpose; and

- (c) That the granting of the variance will be in harmony with the general purpose and intent of this code, and will not be injurious to the neighborhood or otherwise detrimental to the public welfare.

In determining its findings, the Board of Appeal shall take into account: (1) the number of persons residing or working upon such land or in such structure; (2) the character and use of adjoining lots and those in the neighborhood; and (3) traffic conditions in the neighborhood.

**SECTION 7-4. Other Conditions Necessary as Protection.** In approving a variance, the Board of Appeal may attach such conditions and safeguards as it deems necessary to assure harmony with the general purposes and intent of this code, such as, but not limited to, the following:

- (a) requirement of front, side, and rear yards greater than the minimum required by this code;
- (b) requirement of screening of parking areas and other parts of the lot from adjoining lots or from the street, by walls, fences, planting, or other devices;
- (c) modification of the exterior features or appearance of the structure;
- (d) limitation of size, number of occupants, method and time of operation, and extent of facilities;
- (e) regulation of number, design, and location of access drives and other traffic features; and
- (f) requirement of off-street parking and other special features beyond the minimum required by this or other applicable codes or regulations.







TABLE D: DIMENSIONAL REGULATIONS

District	Type of Use	LOT SIZE minimum sq. ft.	LOT AREA minimum sq. ft. for each add'l. dwelling unit	LOT WIDTH minimum feet	FLOOR AREA RATIO maximum (fa. 1)	HEIGHT OF BUILDINGS maximum stories	HEIGHT OF BUILDINGS feet	USABLE OPEN SPACE minimum sq. ft. per dwelling unit	FRONT YARD minimum depth feet	SIDE YARD minimum width feet	REAR YARD minimum depth feet	SETBACK OF PARAPET minimum distance from lot line	REAR YARD maximum % occupied by accessory buildings
<b>RESIDENCE DISTRICTS</b>													
S-3.5	1 family detached	9,000	none	70	0.3	2½	35	none	25	12	40	none	25%
	Other use	9,000	6,000	70	0.3	2½	35	none	30	15	50	none	20
S-5	1 family detached	6,000	none	60	0.5	2½	35	none	25	10	40	none	25
	Other use	6,000	4,000	60	0.5	2½	35	none	30	12	50	none	20
R-5	1 & 2 fam. detached	5,000	3,000	50	0.5	2½	35	none	20	10	40	none	25
	Any other dwelling	5,000	3,000 (fa. 2)	200	0.5	2	35	1,000	25	10	40	none	20
	Other use	5,000	3,000	50	0.5	2½	35	none	25	10	40	none	20
R-8	1 & 2 family row	3,000	2,000	none	0.8	3	35	800	20	10	40	none	25
	Any other dwelling	3,000	1,500	50	0.8	3	35	800	20	10	40	none	25
	Other use	5,000	1,500	50	0.8	3	35	none	25	10	40	none	20
H-1	1 & 2 family row	2,000	1,500	none	1.0	none	none	400	20	(fa. 4)	30	H + L'	25
	Any other dwelling	5,000	1,000	50	1.0	none	none	400	20	(fa. 4)	10 + 20	6	25
	Other use	5,000	1,000	50	1.0	none	none	none	25	(fa. 4)	(fa. 6)	for all uses	15
H-2	Any dwelling	none	none	none	2.0	none	none	150	20	(fa. 4)	10 + 20	H + L'	30
	Other use	none	none	none	2.0	none	none	none	20	(fa. 4)	(fa. 6)	for all uses	15
H-2-65	Any dwelling	none	none	none	2.0	7	65	150	20	(fa. 4)	10 + 20	H + L'	30
	Other use	none	none	none	2.0	7	65	none	20	(fa. 4)	(fa. 6)	for all uses	15
D-3	Any dwelling	none	none	none	3.0	none	none	100	15	(fa. 4)	10 + 20	H + L'	30
	Other use	none	none	none	3.0	none	none	none	15	(fa. 4)	(fa. 6)	for all uses	15
H-4	Any dwelling	none	none	none	4.0	none	none	50	15	(fa. 4)	10 + 20	H + L'	40
	Other use	none	none	none	4.0	none	none	none	15	(fa. 4)	(fa. 6)	for all uses	15
D-5	Any dwelling	none	none	none	5.0	none	none	50	15	(fa. 4)	10 + 20	H + L'	40
	Other use	none	none	none	5.0	none	none	none	15	(fa. 4)	(fa. 6)	for all uses	15
<b>BUSINESS DISTRICTS</b>													
L-5	Any dwelling	(fa. 3)	(fa. 3)	(fa. 3)	0.5	2½	35	(fa. 3)	(fa. 3)	(fa. 3)	(fa. 3)	none	-
	Other use	none	none	none	0.5	2½	35	none	15	none (fa. 5)	20 (fa. 7)	none	-
L-1	Any dwelling	(fa. 3)	(fa. 3)	(fa. 3)	1.0	3	35	(fa. 3)	(fa. 3)	(fa. 3)	(fa. 3)	none	-
	Other use	none	none	none	1.0	3	35	none	10	none (fa. 5)	20 (fa. 7)	none	-
L-2	Any dwelling	(fa. 3)	(fa. 3)	(fa. 3)	2.0	none	none	(fa. 3)	(fa. 3)	(fa. 3)	(fa. 3)	H + L'	-
	Other use	none	none	none	2.0	none	none	none	(fa. 3)	none (fa. 5)	10 + 20 (fa. 7)	for all uses	-
B-1	Any dwelling	(fa. 3)	(fa. 3)	(fa. 3)	1.0	3	40	(fa. 3)	(fa. 3)	(fa. 3)	(fa. 3)	H + L'	-
	Other use	none	none	none	1.0	3	40	none	none	none (fa. 5)	10 + 20 (fa. 7)	for all uses	-
B-2	Any dwelling	(fa. 3)	(fa. 3)	(fa. 3)	2.0	none	none	(fa. 3)	(fa. 3)	(fa. 3)	(fa. 3)	H + L'	-
	Other use	none	none	none	2.0	none	none	none	none	none (fa. 5)	10 + 20 (fa. 7)	for all uses	-
D-4	Any dwelling	(fa. 3)	(fa. 3)	(fa. 3)	4.0	none	none	(fa. 3)	(fa. 3)	(fa. 3)	(fa. 3)	H + L'	-
	Other use	none	none	none	4.0	none	none	none	none	none (fa. 5)	10 + 20 (fa. 7)	for all uses	-
D-8	Any dwelling	(fa. 3)	(fa. 3)	(fa. 3)	8.0	none	none	(fa. 3)	(fa. 3)	(fa. 3)	(fa. 3)	H + L'	-
	Other use	none	none	none	8.0	none	none	none	none	none (fa. 5)	10 + 20 (fa. 7)	for all uses	-
D-10	Any dwelling	(fa. 3)	(fa. 3)	(fa. 3)	10.0	none	none	(fa. 3)	(fa. 3)	(fa. 3)	(fa. 3)	H + L'	-
	Other use	none	none	none	10.0	none	none	none	none	none (fa. 5)	10 + 20 (fa. 7)	for all uses	-
<b>INDUSTRIAL DISTRICTS</b>													
M-1	Any use	none	none	none	1.0	2½	35	none	20	(fa. 5)	20	H + L'	-
												6	
M-2	Any use	none	none	none	2.0	none	none	none	none	(fa. 5)	12	H + L'	-
												6	
M-4	Any use	none	none	none	4.0	none	none	none	none	(fa. 5)	12	H + L'	-
												6	
M-8	Any use	none	none	none	8.0	none	none	none	none	(fa. 5)	12	H + L'	-
												6	
I-2	Any use	none	none	none	2.0	none	none	none	none	(fa. 5)	12	H + L'	-
												6	
V-2	Any use	none	none	none	2.0	none	none	none	none	(fa. 5)	12	H + L'	-
												6	

Key L = Length of wall parallel (or within 45° of parallel) to lot line, measured parallel to lot line.

H = Height of building above the height below which no setback is required.

L' = Length of wall parallel (or within 45° of parallel) to lot line, measured parallel to lot line at greatest length above the height below which no setback is required.

- (1) See Sections 15-2, 15-3, and 15-4 for cases where maximum floor area ratio may be exceeded. (2) No additional lot area for first 30 dwelling units.  
 (3) See Section 13-4. (4) Ten feet plus one twentieth of the length of the wall parallel (or within 45° of parallel) to the side lot line, see further Section 19-4. (5) See Section 19-5. (6) See Section 20-4. (7) See Section 20-5.



**SECTION 15-3. Increase in Floor Area Ratio for Abutting Public Open Space.** Subject to the provisions of Section 15-5, where a lot in an H or a B district abuts on any side on a public open space more than one hundred feet wide or on one of two or more contiguous public open spaces more than one hundred feet wide in the aggregate, fifty feet or one half of the width of such open space in excess of one hundred feet, whichever is less, shall be added to the depth of the lot in calculating the area of the lot for the purposes of Section 15-1.

**SECTION 15-4. Increase in Floor Area Ratio for Large Lots in H-5 Districts.** (a) Subject to the provisions of Section 15-5, the maximum floor area ratio specified in Table B of Section 13-1 shall be increased by 1.0 in the case of a lot in an H-5 district containing twelve thousand or more, but less than twenty thousand, square feet.

(b) Subject to the provisions of Section 15-5, the maximum floor area ratio specified in Table B of Section 13-1 shall be increased by 2.0 in the case of a lot in an H-5 district containing twenty thousand square feet or more.

**SECTION 15-5. Limitation to Excess Floor Area Ratio Provisions under Sections 15-2, 15-3 and 15-4.** In no case shall the maximum floor area ratio exceed the following limits:

Where Maximum Floor Area Ratio Specified in Table B is	Under Section 15-2	Under Section 15-3	Under Section 15-4a	Under Section 15-4b	All Sections
1.0	1.2	1.2			1.3
2.0	2.5	2.5			3.0
3.0	4.0	4.0			5.0
4.0	5.5	5.5			7.0
5.0	6.5	6.5	6.0	7.0	9.0
8.0	10.0	10.0			12.0
10.0	12.0	12.0			14.0

**SECTION 15-6. Special Floor Area Ratio Provisions for Regulated Projects.** Notwithstanding the provisions of Section 15-5, in the case of a lot in a B-8 or a B-10 district constituting part of a project under Chapter 121, or Chapter 121A, of the General Laws for the development or redevelopment of five or more acres of land, the floor area ratio may exceed the maximum floor area ratio specified in Table B of Section 13-1; provided that if so much of the district as constitutes part of such project is taken as one lot, the floor area ratio does not exceed such maximum.

## ARTICLE 15.

### BUILDING BULK

**SECTION 15-1. Floor Area Ratio.** Except as otherwise provided in this Article, the ratio which the gross floor area of all structures on a lot exclusive of floor area required to meet the off-street parking requirements of this code bears to the area of the lot shall not exceed the maximum floor area ratio specified in Table B of Section 13-1. In calculating the area of the lot for the purpose of this section, the following parts of the lot shall be excluded: (a) every part required by any other structure or use to comply with any requirement of this code, and (b) every part the ownership of which is transferred subsequent to the effective date of this code if such part is required for compliance with the provisions of Articles 13 to 22, inclusive, applicable to the lot from which such transfer is made.

**SECTION 15-2. Increase in Floor Area Ratio for Off-Street Parking.** Subject to the provisions of Section 15-5, the maximum floor area ratio specified in Table B of Section 13-1 shall be increased: —

(a) in the case of a residential building in an H or a B district, by ten per cent (10%) of such maximum for each off-street parking space per ten dwelling units in excess of the number required by Article 23; and

(b) in the case of a non-residential building in an H or a B district, by six hundred (600) square feet for each off-street parking space in excess of the number, if any, required by Article 23.



group shall be determined, and then such numbers tallied; and off-street loading facilities with such total number of bays shall be provided.

*Pre-Code Structures.* If a structure existing when this code took effect is altered or extended so as to increase its gross floor area, only the additional gross floor area shall be counted in computing the off-street loading bays required.

[*As amended on April 14, 1967, and on April 30, 1968.*]

SECTION 24-2. *Design.* All off-street loading facilities provided to comply with Section 24-1 shall meet the following specifications:

(a) Such facilities shall have bays, maneuvering areas, and appropriate means of vehicular access to a street, and shall be so designed as not to constitute a nuisance or a hazard or unreasonable impediment to traffic; and all lighting shall be so arranged as to shine away from streets and residences.

(b) Such facilities, including all bays, maneuvering areas and access drives, shall be so graded, surfaced, drained and maintained as to prevent water and dust therefrom going upon any street or another lot.

(c) Each loading bay shall be located entirely on the lot and shall be no less than ten feet in width, twenty-five feet in length, and fourteen feet in height, exclusive of maneuvering areas and access drives. Each loading bay within fifty feet of a residential district shall be enclosed in a structure if the use regularly involves night operations.

SECTION 24-3. *Maintenance.* All off-street loading facilities provided to comply with Section 24-1 shall be maintained exclusively for loading and unloading purposes so long as a use requiring them exists. Such facilities shall be used in such a manner as at no time to constitute a nuisance or a hazard or unreasonable impediment to traffic.

## ARTICLE 24.

### OFF-STREET LOADING

† SECTION 24-1. *Off-Street Loading Bay Requirements.* No structure or land shall be used for any use unless off-street loading facilities are provided on the lot as follows:

Gross Floor Area (in square feet)	NUMBER OF LOADING BAYS REQUIRED		
	Group I Uses*	Group II Uses**	Group III Uses***
Under 15,000	0	0	0
15,000 to 50,000	0	1	1
50,000 to 100,000	0	1	2
100,000 to 150,000	0	2	3
150,000 to 300,000	0	3	4
300,000 and over	0	1	†

† 4 plus 1 for each additional 150,000 square feet.

‡ 5 plus 1 for each additional 150,000 square feet.

\* Uses listed in Table A of Section 8-7 under Use Item Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 26, 27, 28, 31, 32, 33, 39, 40, 50, 52, 53, 58 and 59.

\*\* Uses listed in Table A of Section 8-7 under Use Item Nos. 11, 12, 13, 13A, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 29, 30, 37, 38, 41, 42, 43, 44, 46, 47, 48, 49 and 51.

\*\*\* Uses listed in Table A of Section 8-7 under Use Item Nos. 34, 35, 36, 43, 54, 55, 56, 57, 60, 60A, 61, 62, 63, 64, 65, 66, 67, 68, 69 and 70.

*Mixed Uses.* If a lot by reason of a diversity of occupancies falls within more than one use group, the number of loading bays required by the occupancies within each use



## APPENDIX C





# Appendix C

## Revision of Zoning Districts

### Zoning Districts under the 1924 Code

Height limit: (sets "bulk" district)	35	40	65	80	155
Use Type					
Single residence	S-35				
General residence	R-35	R-40	R-65	R-80	
Local Business		L-40	L-65	L-80	L-155
General Business			B-65	B-80	B-155
Industrial			I-65	B-80	B-155
Unlimited				U-80	U-155

### Zoning Districts under the 1964 Code

FAR Max	.3	.5	.8	1	2	3	4	5	8	10
Use Type										
Residence										
Single Family	S-.3	S-.5								
Two Family		R-.5								
3 Family, Apts.			R-.8							
Apartments				H-1	H-2	H-3	H-4	H-5		
Business										
Local retail & service		L-.5		L-1	L-2					
Retail, business & office				B-1	B-2		B-4		B-8	B-10
Industrial										
Light manufacturing				M-1	M-2		M-4		M-8	
General manufacturing					I-2					
Waterfront industry					W-2					

Source: Zoning for Boston, A Survey and A Comprehensive Plan,  
Report of the City Planning Board, Boston, Mass., 1924

Boston Zoning Code, Effective December 31, 1964



## APPENDIX D



#### Appendix D: Calculating Bonus:Amenity Relationships

Most incentive ordinances in effect function in an "automatic" fashion by establishing a set of bonus:amenity relationships that provide the developer and his architects with a basis for designing a development proposal. These formulas specify the extent to which each eligible amenity or locational preference provided in the development will entitle the developer to increased density, sometimes in the form of a percentage over the base floor area ratio, more often in terms of specific additional square feet of gross floor area that may be added to the building. The relationships are derived by developing estimates of (1) the value to the developer of additional floor area and (2) the cost of providing each amenity, and then selecting an appropriate balance between the two, so that the value will exceed cost to the extent necessary to induce participation by developers. These relationships all further within the context of selecting the base FAR and the maximum bonus for each amenity to be included and for all amenities (and locational preferences) in the aggregate.

The cost of amenities -- for example, open or enclosed plazas, connections to rapid transit or parking facilities, additional building entrances -- are estimated directly for current costs on a hypothesized, prototypical development site; no specific amenity cost estimates have been made in the present study. The value to the developer of bonus space is estimated through an adaption of the residual land valuation approach: the projected development cost for the additional space is deducted from the capitalized value of the estimated net operating income that it will produce. This procedure has been employed in the present study to provide estimates of the value



of recent and possible future high-density office development in Boston. The factors intrinsic to such a calculation and the steps followed are presented in the sample worksheet in this appendix. For the purpose of providing the estimates, it was of course necessary to set particular values for each factor. These values were set in relation to recent actual conditions in the Boston office space market; but although the particular values employed are believed to be reasonable and appropriate, they cannot be taken as definitive. There may well be differing opinions on the suitability of any one, or more, of these values, and the selection of values is obviously critical to the results obtained. As is well known real estate development is a highly leveraged investment mode, and small changes in the value of any factor can significantly affect the overall results of these calculations. Again, the estimates made here are believed to establish a reasonable guide to the total values involved; the worksheet is available to allow revision of these estimates through the selection of alternate possible values.

The values used in deriving the estimates presented in the text are as follows:

Efficiency rate:	89%
Rental rate:	\$10/s.f.
Vacancy allowance:	5%
Operating expenses:	\$2/s.f.
Real estate taxes:	20% effective gross income
Capitalization rate:	.09
Development cost:	\$46/s.f.

The application of these values established a value of approximately \$9 per gross square foot of additional floor area provided. To estimate the extent of the opportunity presented to the city by recent development,





eight recent and proposed major office development within B-10 districts with high FARs were selected. For each, the total gross square footage allowed and the effective FAR were compared with the theoretical maximum gross square footage under FARs of 10 and 14, the low and high ratios possible under the present code in a B-10 area, to estimate the "excess" footage in each alternative. The total for all buildings under each alternative was then multiplied by the estimated value per gross square foot, derived as explained above, to estimate total "gross" value (to developers). "Net" value, an estimate of the projected value of amenities that might have been provided to the city under an incentive zoning ordinance, was calculated on the basis of a necessary effective net bonus to developers of 50% over cost; that is, "gross" value to developers was taken as 150% of "net" amenity value to the city. An overall ratio of gross and net bonus values to total gross square feet was then derived and applied to projections of future rates of development. The buildings used and the results obtained are presented in a table in this appendix.



Sample Worksheet: Valuation of Bonuses

Gross s.f.: \_\_\_\_\_

@ Efficiency rate of \_\_\_\_%

Net s.f.: \_\_\_\_\_

@ \$ /s.f./ rental

Potential gross rental income: \$ \_\_\_\_\_

Less: vacancy allowance @ \_\_\_\_% \$ \_\_\_\_\_

Effective gross rental income: \$ \_\_\_\_\_

Less: operating expenses @ \$ /s.f. \$ \_\_\_\_\_  
taxes @ \$ \_\_\_\_\_

NET OPERATING INCOME: \$ \_\_\_\_\_

Capitalization rate: \_\_\_\_

Valuation: Net operating income: \$ \_\_\_\_\_ = \$ \_\_\_\_\_  
Capitalization rate: \_\_\_\_\_

Less: Development cost @ \$ /s.f.: \$ \_\_\_\_\_

Value of Bonus Space: \$ \_\_\_\_\_



Estimated Value of Excess FAR

<u>Building</u>	<u>Gross S.F.</u>	<u>FAR</u>	<u>Excess s.f.</u>	
			<u>Base 10</u>	<u>Base 14</u>
State Street Bank	852	17	351	150
New England Merchants Bank	800	25	480	352
Boston Company	825	20	413	248
First National Bank	1,460	18	649	324
Keystone	765	26	471	353
Employers-Commercial Union	1,300	21	680	433
National Shawmut Bank	1,050	19	497	276
60 State Street	<u>973</u>	18	<u>432</u>	<u>216</u>
	<u>8,025</u>		<u>3,973</u>	<u>2,352</u>

"Gross" value of excess  
to developers (based  
on valuation at  
\$9/s.f.)

\$36,000,000      \$21,000,000

"Net" value of potential  
amenities to city (based  
on "incentive" to devel-  
opers of 50% over amenity  
cost)

\$24,000,000      \$14,000,000

Projection of future develop-  
ment (6 million s.f., 1973-78)

"Gross" value

\$27,000,000      \$16,000,000

"Net" value

\$18,000,000      \$11,000,000



## APPENDIX E





#### Appendix E: Excerpts from "Boston Downtown Study"

The Urban Design Department of the BRA completed a Downtown Design and Development Study in the Summer of 1969. Recognizing the extent to which development in the downtown area was to an increasing extent taking place in the absence of an overall city policy, the study recommended two related "principles" to supplement zoning and urban renewal controls: a "development envelope" to control the siting and orientation of new construction, and a "public framework" for city-initiated redevelopment to complement this new construction. Both these principles were intended to work towards the primary objective of maintaining and improving Boston as a "walking city" in the face of intensive redevelopment; that is, to enhance pedestrian accessibility, movement and amenities. In this sense, the report was an attempt to establish a planning goal for the downtown area similar to those inherent in the San Francisco Downtown Zoning District, although it was never embodied in the zoning code. The statement of principles for defining the "development envelope" provided in the report could be taken as a starting point for a statement of downtown objectives today, and is included here along with illustrative excerpts from the study.

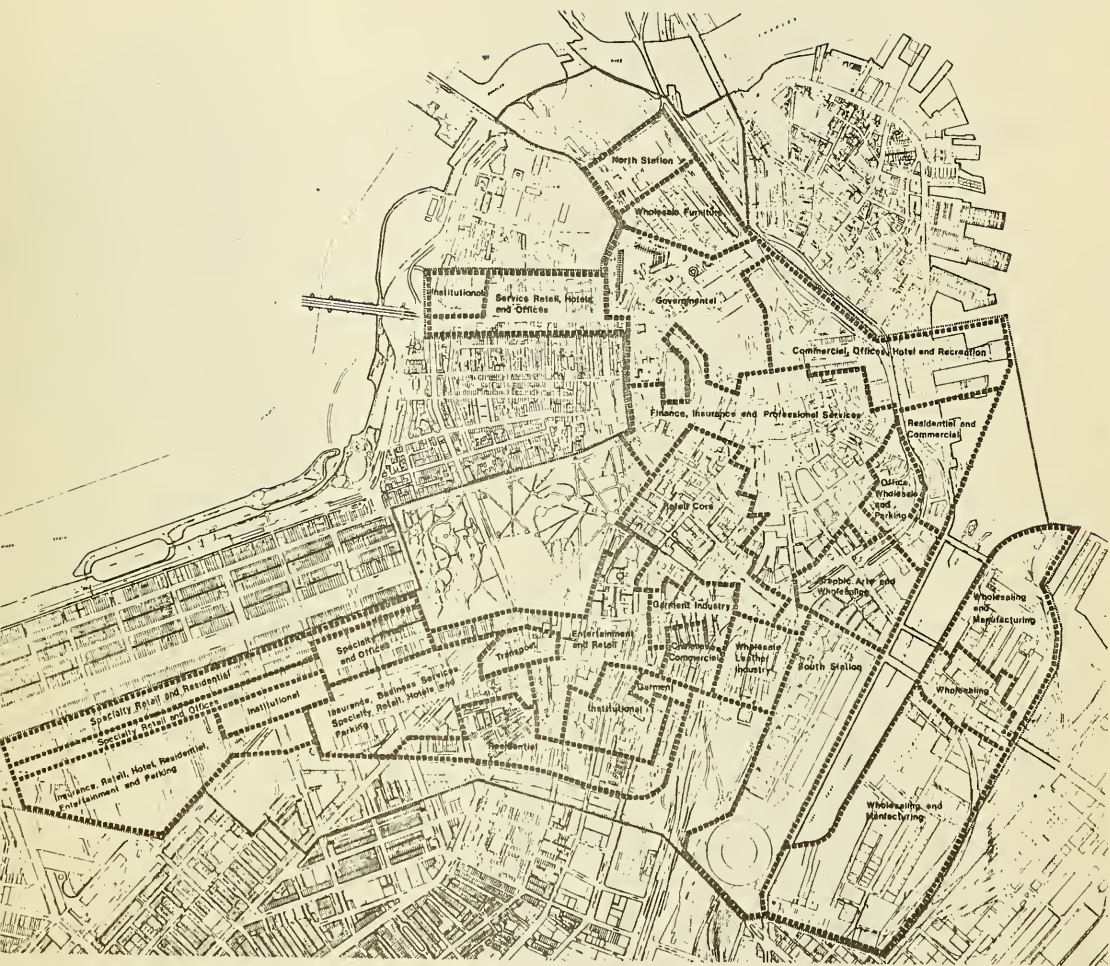


## Proposed Guidelines for "Development Envelope"

"In principle, the Development Envelope for a particular location should respond to the following factors:

1. Precedent: integrate new development with existing buildings or activities where this is important for visual, or functional reasons.
2. Sight Line and Vista: create or maintain desirable scale relationships, visual continuity and significant visual sight lines.
3. Historical Character: protect the scale, character and urban context of areas of historic or architectural significance.
4. Light and Sun Orientation: maximize sunlight available to pedestrian environment by setting limits on the overshadowing of streets and open spaces.
5. Pedestrian Volume: provide pedestrian related land uses to coincide with primary concentrations of pedestrians.
6. Traffic Volume: minimize coincidence of high vehicular traffic volumes and pedestrian movement.
7. Street and Sidewalk Width: relate development envelopes to the visual, climatic, and functional characteristics of streets, sidewalks, and open spaces.
8. Land Use: insure compatibility and diversity of land uses in response to functional relationships between major land uses and pedestrian services and amenities.
9. Working Population: relate development to particular locations of workers, shoppers, and sightseers throughout the downtown.
10. Pedestrian Level Activity: encourage the number and diversity, of pedestrian related land uses throughout the downtown and particularly in relation to the Public Framework.
11. Real Property Value: relate the intensity of land uses to existing and potential property values.





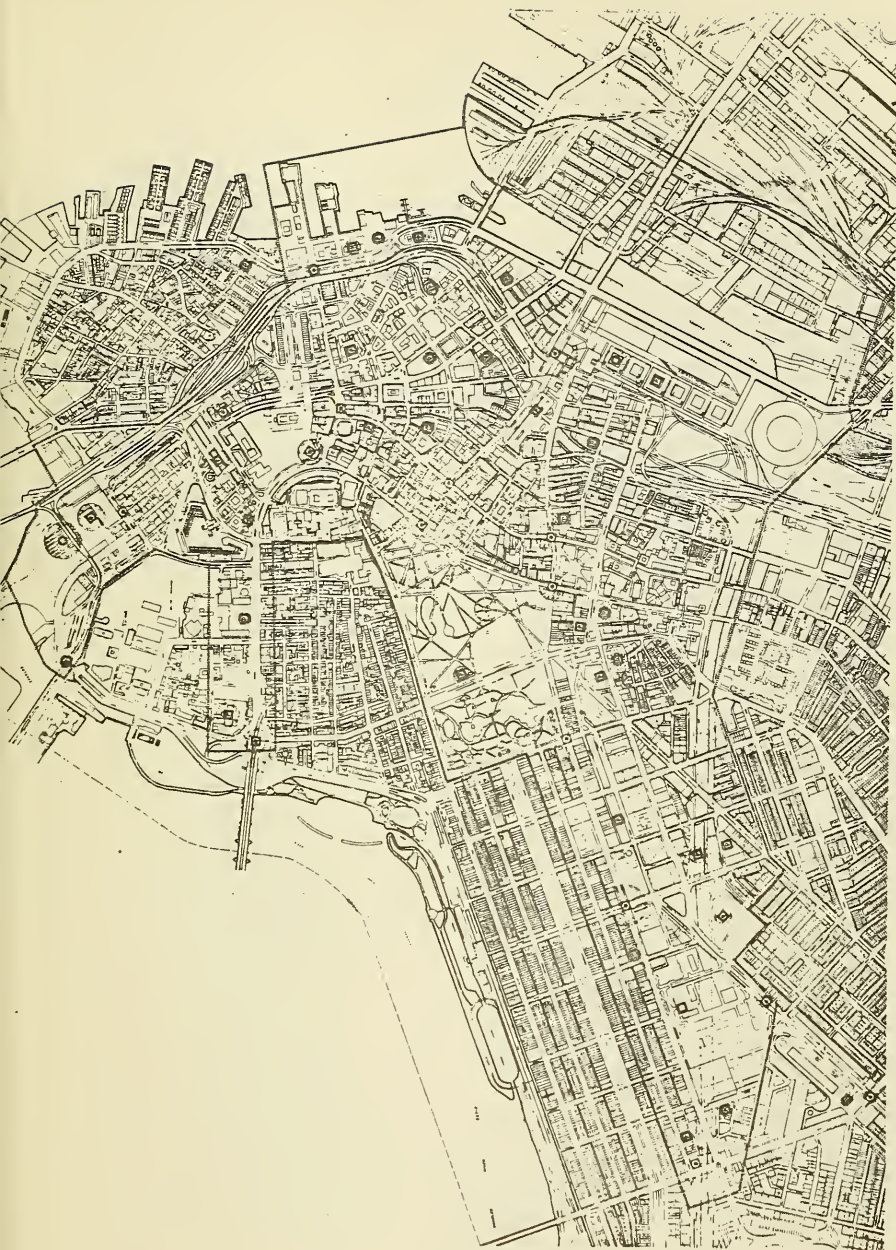
## ING FUNCTIONAL AREAS

— Study Area Boundary  
 ---- Existing Functional Areas Boundary

0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000

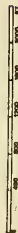
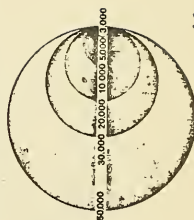






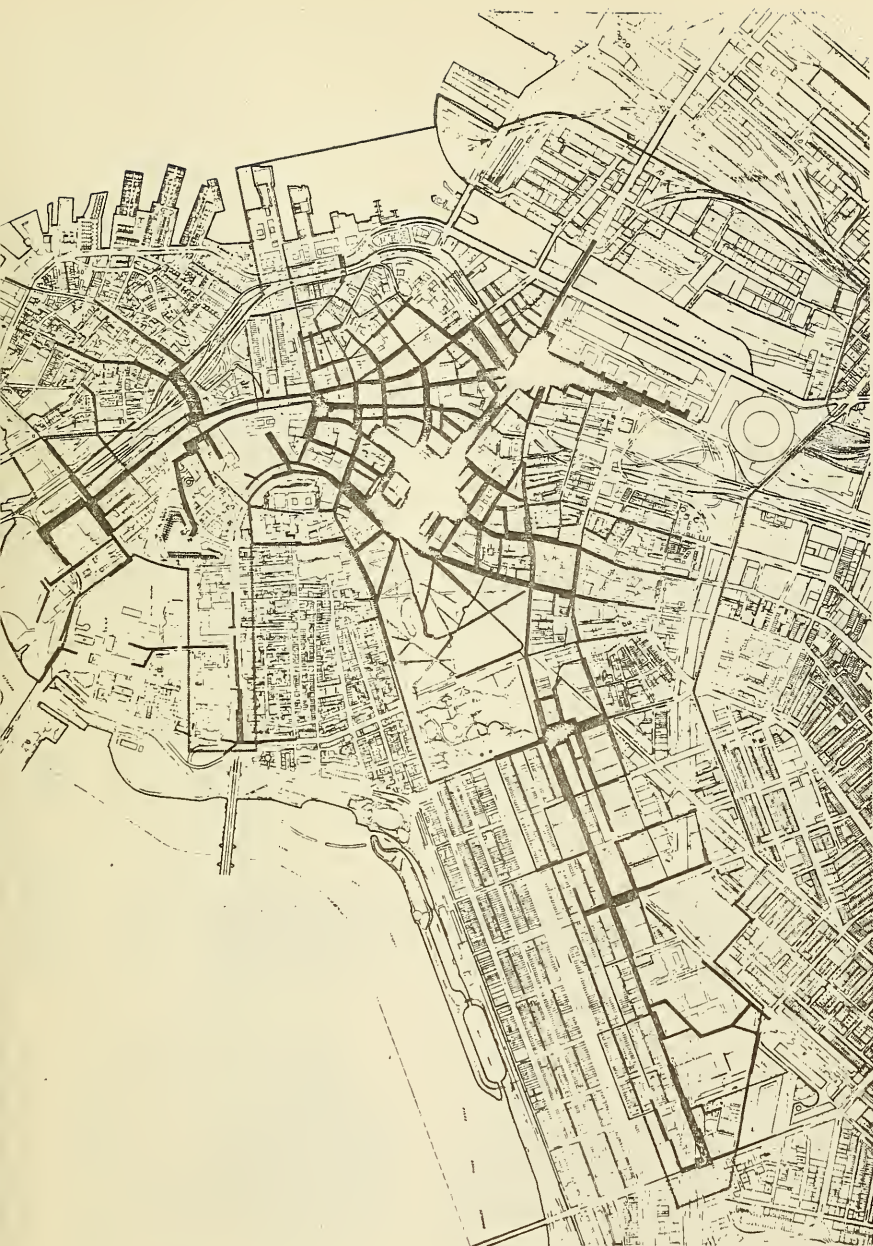
## PEDESTRIAN ORIGINS

- Study Area Boundary
- Railroad Station
- Parking Facility (Existing and Proposed)
- Rapid Transit Station



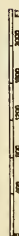






Study Area Boundary  
Indicates relative  
volume, not absolute  
volume.

# PEDESTRIAN VOLUME





# building name

gross floor  
area S.F.

cost  
\$M

site area  
S.F.

FAR

stories

## PAST EXAMPLES

CUSTOM HOUSE TOWER	90,000	NA (1914)	17,000	5.	32
BOSTON POST OFFICE	600,000	NA (1931)	48,000	12	18
<b>1962-67</b>					
STATE OFFICE BUILDING	600,000	18	200,000	3	22
FEDERAL OFFICE BUILDING	800,000	22	200,000	4	26
PRUDENTIAL	1,000,000	31	380,000	2.6	5
NET&T ADDITION	300,000	9	26,000	11	20
CENTER PLAZA (162)	500,000	14	100,000	5	9
STATE STREET BANK	800,000	25	70,000	12	36
TRAVELERS ADDITION	120,000	3.2	48,000	5.6	16
CHAS. RIVER PARK	100,000	2.7	70,000	1	9
CHASE BUILDING	180,000	5.4	9,000	20	13
160 FRANKLIN	75,000	2.0	9,800	7.7	7
Sub Total	4,475,000	132.3	1,112,800	7.3 Average	21 Average

## 1968-69

STATE SERVICE CENTER	1,500,000	65	300,000	4	25
CITY HALL	500,000	24	120,000	4.2	9
CHRISTIAN SCIENCE	350,000	11	200,000	2	27
N.E. MERCHANTS BANK	800,000	25	32,000	25	40
CENTER PLAZA (3)	250,000	7	50,000	5	9
HANCOCK	2,100,000	85	200,000	11	60
EMPLOYERS'	1,300,000	44	48,000	21	40
BOSTON COMPANY	800,000	24	40,000	20	40
KEYSTONE	770,000	22	24,000	20	32
BOSTON GAS	600,000	18	24,000	25	33
FIRST NATIONAL BANK	1,400,000	40	77,000	18	38
PRUDENTIAL 2	600,000	18	64,000	9	33
ONE WASHINGTON MALL	200,000	7	15,000	13	15
BOSTON 54	50,000	2.5	20,000	2.5	5
Sub Total	11,220,000	392.5	1,214,000	13 Average	29 Average

## 1969-70+

SOUTH STATION	700,000	24	200,000	3.5	15
DEWEY SQUARE	1,750,000	56	70,000	25	60
CC&F (CONGRESS)	1,200,000	60	63,000	19	40
BLUE CROSS	600,000	21	62,000	10	30
FEDERAL RESERVE	800,000	29	150,000	5	40
OLD GLOBE	350,000	25	25,000	15	15
SHAWMUT	800,000	27	57,000	14	40
Sub Total	6,200,000	242.0	627,000	14 Average	34 Average
TOTAL	21,895,000	766.8	2,963,800	11.33 Average	28 Average



## APPENDIX F



Appendix F: Excerpts from Ordinances in Other Cities

[Provided under separate cover.]















